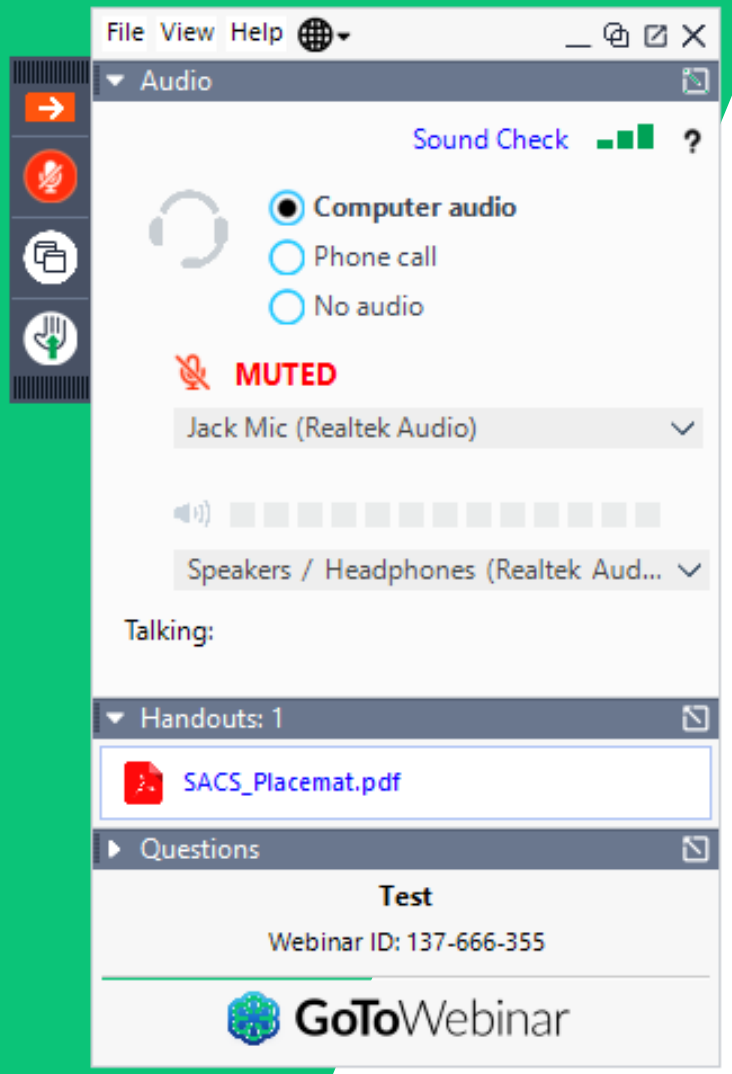
South Atlantic Coastal Study

Report Roll-out Meeting: Georgia
October 27, 2021

US Army Corps of Engineers®

Working Today to Build a Better Tomorrow

Housekeeping



- **Lines will start as muted but can be opened for discussion. Please mute yourself when not speaking to limit background noise.**
  - Use the raise hand feature to alert staff you have a comment
- **Questions and comments can also be submitted via the chat box throughout the presentation**
  - If having technical difficulties reach out via chat to staff.
- **A PDF of the slides is available in the Handouts section.**

USACE & Facilitator Team

Savannah District Project Delivery Team:

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★ Jared Lopes	Water Resources Planner
Andrea Farmer	Archaeologist
Lori Hadley	Coastal Engineer
Emily Wortman	Civil Engineer
Mary Richards	Biologist

CDM Smith:

Donielle Grimsley	CDM Smith Facilitator

USACE Command Team:

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Matt Schrader	Planning Lead
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Drew Condon	Engineering Lead
Trevor Lancaster	GIS Lead
Kristina May	Environmental Lead
Clay McCoy	RSM Lead
Lisa Clark	Outreach Lead

★ Savannah District Meeting Facilitators

Working Today to Build a Better Tomorrow

Virtual Poll – What type of organization do you represent?

- Federal Agency/ Tribal Nations
- State/Local Agency
- Academia
- Non-Governmental Agency
- Other

South Atlantic Coastal Study (SACS) Report Roll-out Meeting: Agenda

Intro / Purpose	SACS Overview	Overview of Reports	Comment Collection
• Introductions • Meeting Purpose • Link to Released Report	• Shared Vision • Study Area • Study Framework	• Main Report • Technical Appendices • Geoportal • Georgia Appendix • Focus Area Action Strategies	• Report Access • Comment Collection • Feedback Consideration

Meeting Purpose

1. Provide a brief overview of the South Atlantic Coastal Study (SACS) reports and products
2. Present DRAFT SACS findings and recommendations for the state of Georgia
3. Walk through report structure and organization to facilitate stakeholder review
4. Feedback and comment collection

SACS Report Now Available

https://www.sad.usace.army.mil/SACS/

South Atlantic Coastal Study - SACS

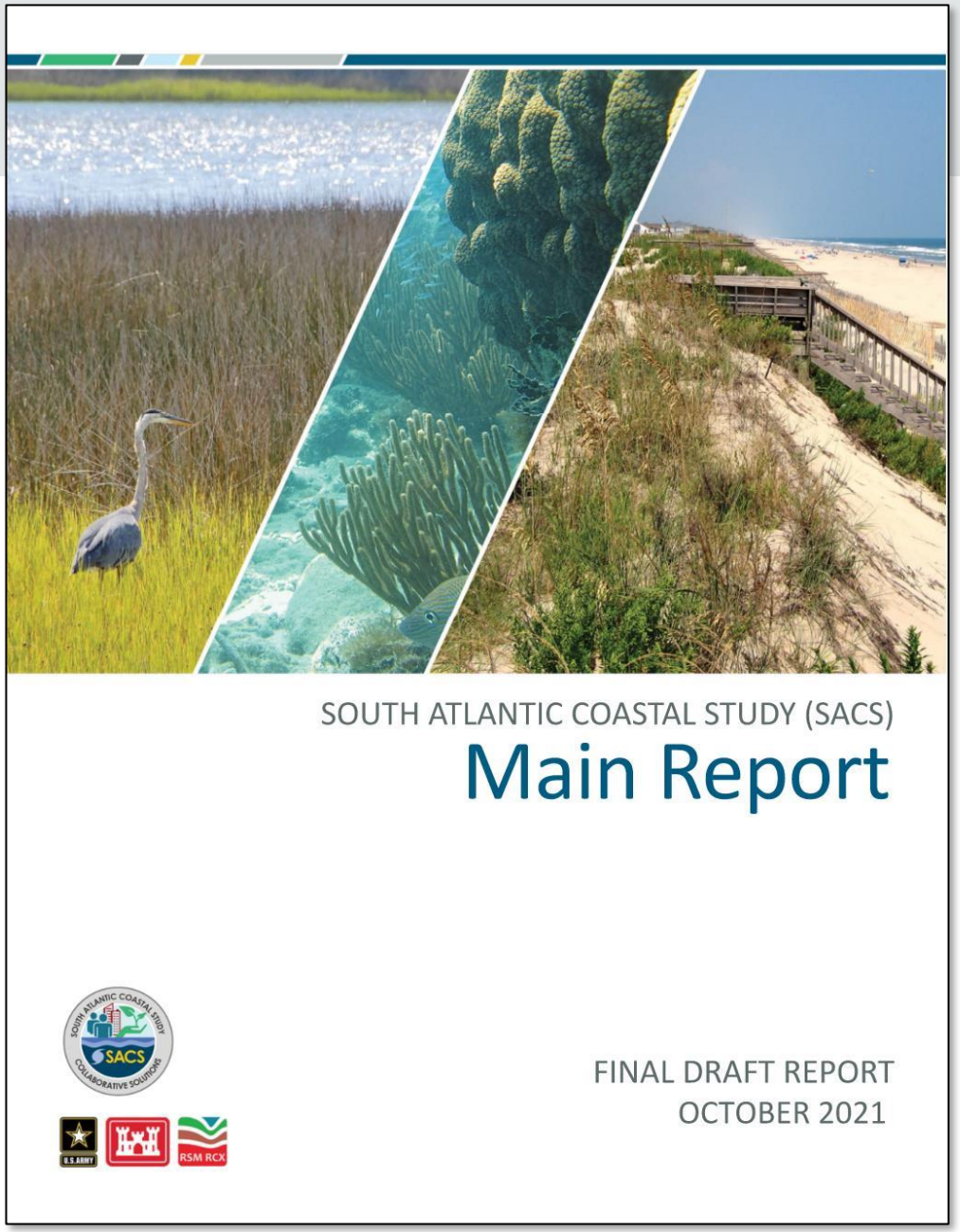
SACS Shared Vision

The SACS vision is to provide a common understanding of risk from coastal storms and sea level rise to support resilient communities and habitats. This collaborative effort will leverage stakeholders' actions to plan and implement cohesive coastal storm risk management strategies along the South Atlantic and Gulf Coast shorelines, including the territories of Puerto Rico and the U.S. Virgin Islands.

SACS Draft Reports

SACS Draft Reports are available for review and comment through November 15, 2021. Comments can be provided through the following form: https://www.surveymonkey.com/r/SACS_comments

SACS Main Report	Outreach Appendix	Florida Appendix	Puerto Rico Appendix
Engineering Appendix	Alabama Appendix	Mississippi Appendix	South Carolina Appendix
Geospatial Appendix	Georgia Appendix	North Carolina Appendix	U.S. Virgin Islands Appendix
Recommendations Summary Spreadsheet			



Virtual Poll – What involvement have you had in the SACS process?

Attended Field Workshop (December 2019)

Attended Focus Area Webinars (July – Dec 2020)

Attended Environmental/ Cultural/ Military Webinars (July – Dec 2020)

Attended Any SACS Quarterly Webinar

No Previous Involvement

SACS Overview

SACS Shared Vision

The SACS vision is to provide a common understanding of risk from coastal storms and sea level rise to support resilient communities and habitats. This collaborative effort will leverage stakeholders' actions to plan and implement cohesive coastal storm risk management strategies along the South Atlantic and Gulf Coast shorelines, including the territories of Puerto Rico and the U.S. Virgin Islands.

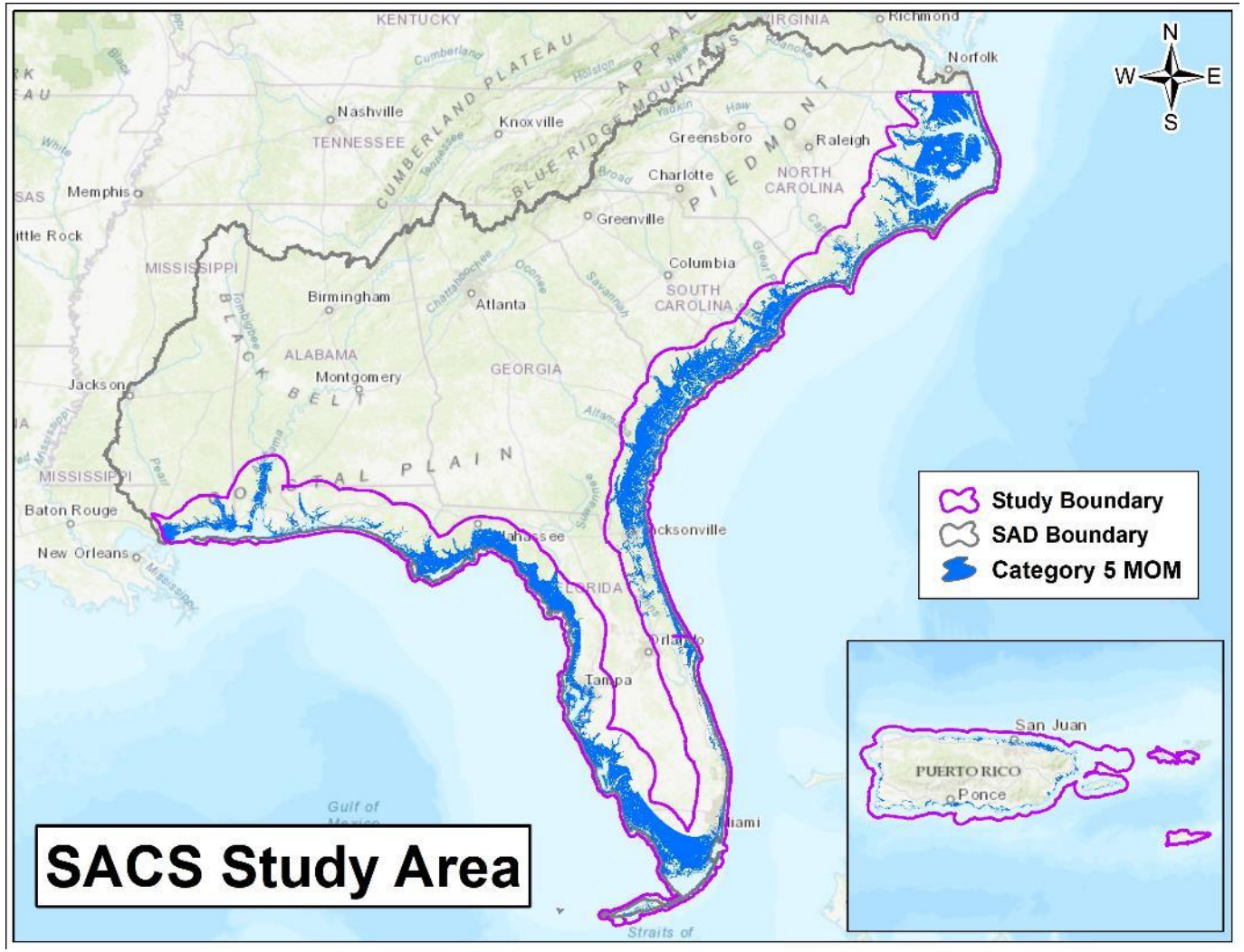
Study Goals

The Goals of the SACS are to:

1	**PROVIDE A COMMON OPERATING PICTURE OF COASTAL RISK** Provide decision-makers at all levels with a comprehensive and consistent regional assessment of coastal risk.
2	**IDENTIFY HIGH-RISK LOCATIONS AND FOCUS CURRENT AND FUTURE RESOURCES** Enable resources to be focused on the most-vulnerable areas.
3	**IDENTIFY AND ASSESS RISK REDUCTION ACTIONS** Assess actions that would reduce risk to vulnerable coastal populations.
4	**PROMOTE AND SUPPORT RESILIENT COASTAL COMMUNITIES** Ensure a sustainable coastal landscape system, considering future sea level rise scenarios and climate change. Provide information to stakeholders to optimize existing efforts to reduce risk.
5	**PROMOTE SUSTAINABLE PROJECTS AND PROGRAMS** Develop and provide consistent foundational elements to support coastal studies and projects. Regionally manage projects through RSM and other opportunities.
6	**LEVERAGE ONGOING ACTIONS** Current study and implementation efforts will inform, and be informed by, the SACS.

Study Area

Approximately 65,000 miles of tidally influenced coastline in the South Atlantic Division area of responsibility affected by sea level rise (SLR) where hurricane and storm damages are occurring or are forecast to occur.



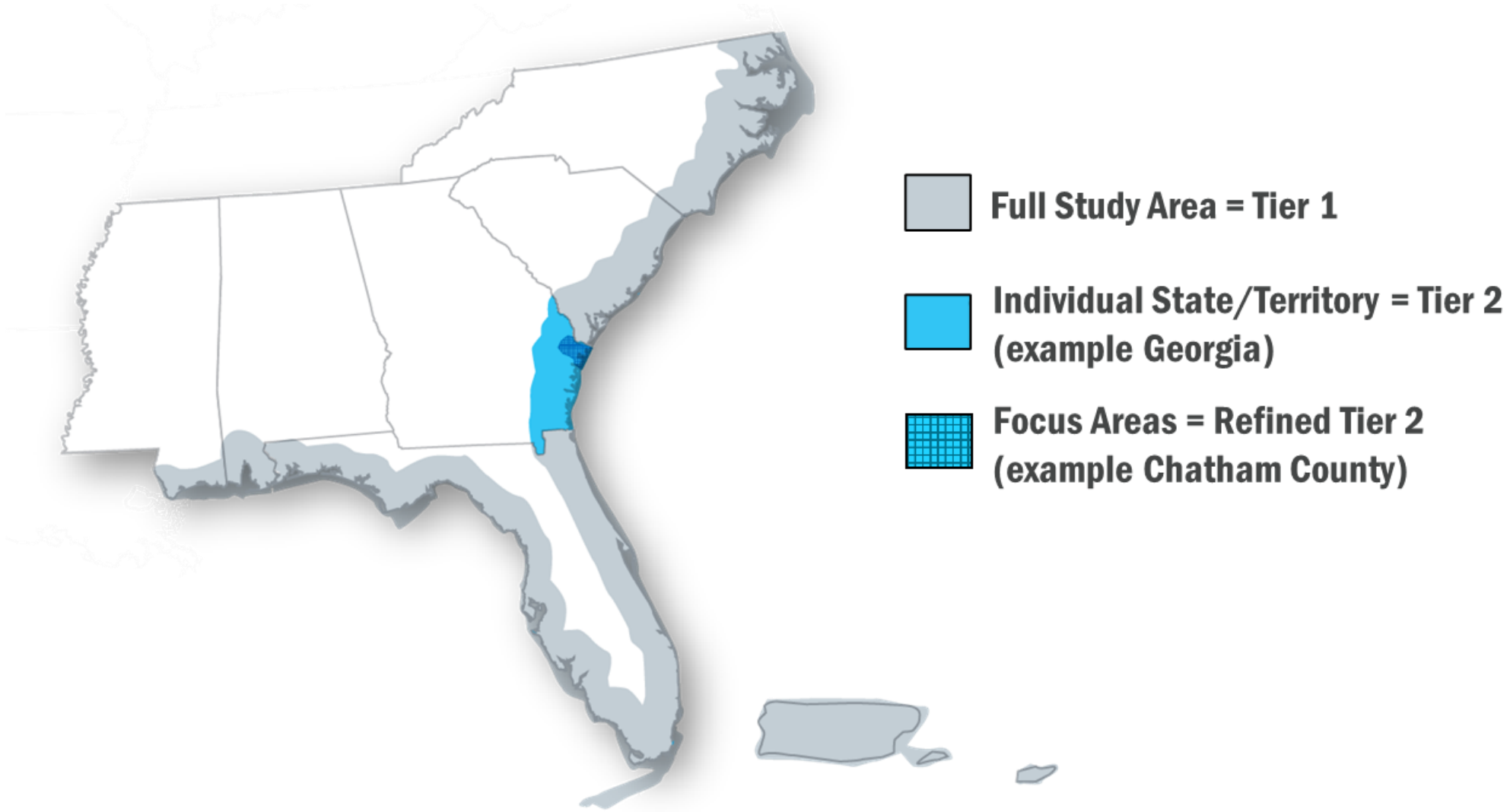
Applying the Framework

Completed in the SACS

Beyond SACS

COASTAL STORM RISK MANAGEMENT FRAMEWORK		TIER 1 FULL STUDY AREA	TIER 2 STATE/TERRITORY	TIER 2 FOCUS AREA
STEPS COMPLETED AT A CONCEPTUAL LEVEL BY THE SACS				
1	INITIATE ANALYSIS	Stakeholder collaboration to identify study problems, opportunities, and goals and develop a shared vision statement.	Stakeholder collaboration workshops to identify state- and territory-specific problems, opportunities, and constraints.	Focus-area-specific vision meetings with stakeholders. Identify problems, opportunities, and leverage stakeholders for ongoing and planned work.
2	CHARACTERIZE CONDITIONS	Tier 1 risk assessment uses national level datasets to characterize conditions, including FEMA, NOAA, and other federal agency data.	Higher-resolution information is applied: Priority Environmental Area Identification, consideration of erosion and additional coastal hazards.	Depending upon the level of work previously completed in focus areas, Tier 1 and Tier 2 data and/or higher resolution data are used to characterize conditions.
3	ANALYZE RISK AND VULNERABILITY	Tier 1 risk assessment provides a consistent analysis of potential coastal risk from storm surge inundation and sea level rise.	• State and territory appendices provide additional detail on risk and hazards • Tier 2 Economic Risk Assessment • Priority Environmental Area Identification	Tier 1 and Tier 2 and/or higher-resolution data are used to define areas and drivers of high risk.
4	IDENTIFY POSSIBLE SOLUTIONS	• Measures & Cost Library includes structural, non-structural, and natural and nature-based features. • Coastal Program Guide identifies programs and resources available to stakeholders.	Broad application of the: • Measures & Cost Library • RSM Optimization • SAND Report • Project Performance Evaluation • Coastal Program Guide	Location-specific application of the: • Measures & Cost Library • RSM Optimization • SAND Report
5	EVALUATE AND COMPARE SOLUTIONS	Measures & Cost Library provides planning level costs of measures to reduce risk.	State and territory appendices identify opportunities to address high-risk areas.	Stakeholder collaboration on a strategy composed of actions to reduce risk. • Measures & Cost Library • Tier 2 Economic Risk Assessment
ADDITIONAL STEPS TO BE COMPLETED IN FUTURE REPLICATIONS OF THE FRAMEWORK AT REFINED SCALES				
6	SELECT PLAN	TIER 3		Coordinated strategy is produced to identify stakeholder/agency responsibilities for further action.
7	DEVELOP IMPLEMENTATION PLAN			
8	EXECUTE PLAN			
9	MONITOR AND ADAPT			

Applying the Framework: Geographic Scales



Full Study Area = Tier 1

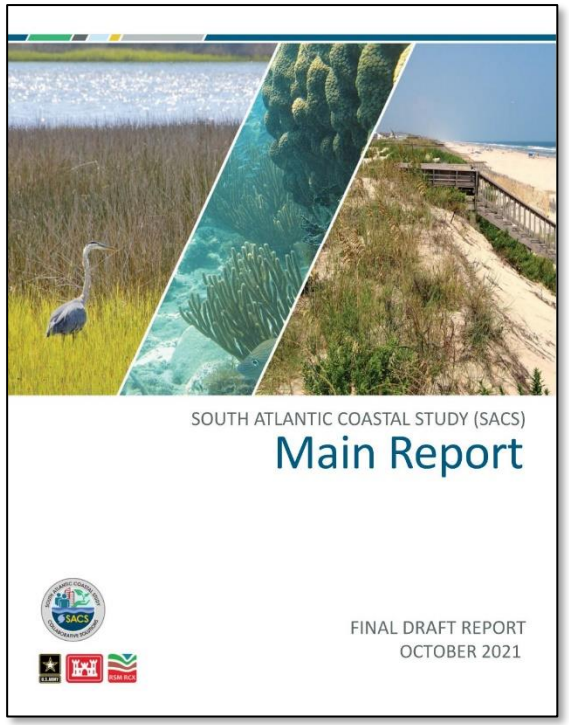
Individual State/Territory = Tier 2
(example Georgia)

Focus Areas = Refined Tier 2
(example Chatham County)

Overview of Reports

SACS Reports and Products for Review

South Atlantic Coastal Study Main Report



Appendices

- Engineering Appendix
- Geospatial Appendix
- Outreach Appendix
- Alabama Appendix
- Florida Appendix
- Georgia Appendix
- Mississippi Appendix
- North Carolina Appendix
- Puerto Rico Appendix
- South Carolina Appendix
- U.S. Virgin Islands Appendix

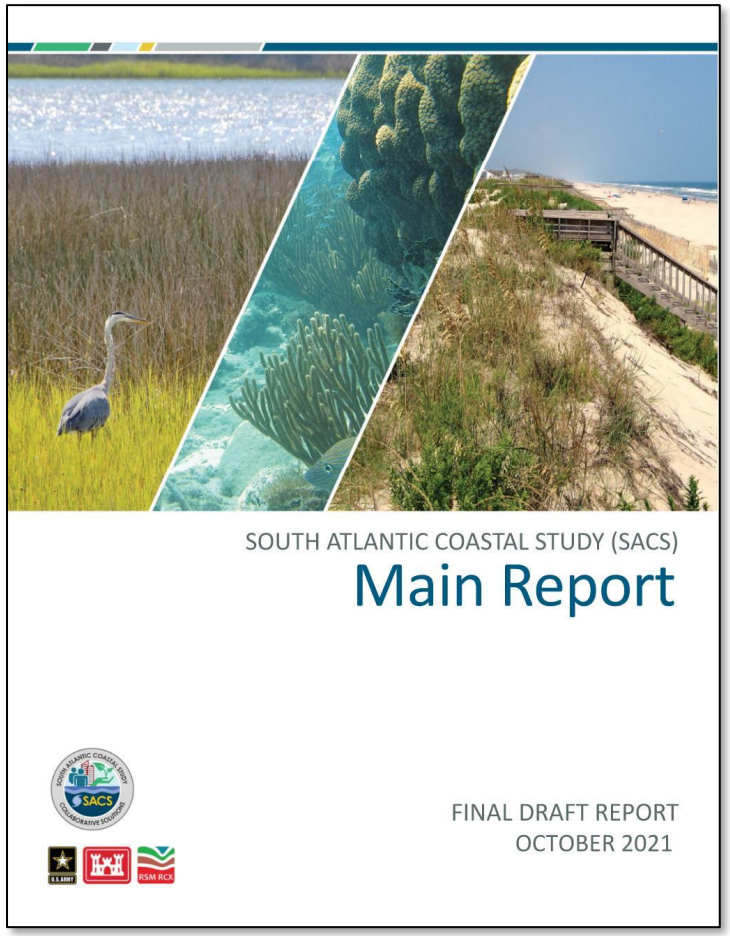
Focus Area Action Strategies

- AL: Western Mobile Bay and Tensaw River Delta
- GA: Chatham County
- GA: Glynn County
- FL: Northeast Florida
- FL: East Central Florida
- FL: Southeast Florida
- FL : Southwest Florida
- FL: Tampa Bay Region
- FL: Panama City, Panama City Beach, Mexico Beach, and Tyndall Air Force Base
- FL: Pensacola, Fort Walton Beach, and Destin
- MS: Greater Pascagoula
- MS: Biloxi-Gulfport
- NC: Dare County and Ocracoke
- NC: Carteret and Craven Counties
- NC: New Hanover and Brunswick Counties
- PR: Cabo Rojo
- PR: Isabela to Rincón
- SC: Grand Strand
- SC: Charleston Metro
- USVI: Christiansted
- USVI: Charlotte Amalie

Supporting Documents

- SACS Geoportal
- Measures and Costs Library Report
- Institutional and Other Barriers Report
- Coastal Program Guide
- 2020 Regional Sediment Management Optimization Update
- Planning Aid Report
- Sand Availability and Needs Determination (SAND) Report
- Environmental Technical Report
- Tier 2 Economic Risk Assessment Report

Main Report Organization



Executive Summary

Section 1 – Study Overview

Section 2 – Stakeholder Engagement

Section 3 – Findings

Section 4 – Applying the Framework: Tier1

Section 5 – Applying the Framework: Tier 2

Section 6 – Institutional and Other Barriers

Section 7 – Recommendations

Section 3 - Regional Findings

1. Significant coastal storm risk and consequential flooding exists throughout the study area and will dramatically increase as sea level rises and critical thresholds are surpassed.
2. Significant risk exists where development practices have created areas of dense infrastructure with limited or nonexistent adaptive capacity to contend with changing conditions.
3. Existing CSRM actions that are deemed effective should be maintained and modified in relation to changing conditions and should serve as examples for needed actions.
4. Regional sediment management (RSM) and beneficial use of dredged material strategies support economically sustainable and environmentally acceptable solutions to reduce coastal risk and must continue to be advanced throughout the region.
5. Joint responsibility is critical to risk management, as the footprint and complexity of coastal risk is continuing to increase. Because all stakeholders play a part in managing risk, collaborative planning among local, state, tribal, and federal entities, NGOs, academia, business, and industry must improve and burgeon actions to reduce risk.
6. Shared tools and information will assist in assessing, communicating, and addressing risk.
7. Natural and Nature-Based Features (NNBFs) are viable options for reducing coastal risk and providing co-benefits.
8. Where avoidance of risk is not possible, communities should adopt combinations of solutions, including nonstructural, structural, NNBF, and programmatic measures to manage risk.
9. RSM can supply sediment sources applicable for risk management efforts that provide monetary and nonmonetary benefits.

Regional Strategy

- The SACS **shared vision** led to development of **goals** and **objectives**.
- SACS **key products** were developed to support goals and objectives.
- The **regional strategy** is composed of ongoing, planned, and needed actions by all stakeholders (shared responsibility).
- **Recommendations** are made to advance actions considered most effective at managing risk.
  - Organized per category and implementation timing
  - Regional priority recommendation selected per category

"Coastal storm risk management is a shared responsibility, and we believe there should be shared tools used by all decision makers to assess risk and identify solutions."

Commanding Officer (2015)
U.S. Army Corps of Engineers
North Atlantic Division

Recommendation Organization

CATEGORIES FROM SACS AUTHORITY

- Activities and Areas Warranting Further Analysis

- Address Barriers Preventing Comprehensive Risk Management

- Design and Construction Efforts

- Recommendations on Previously Authorized USACE Construction Projects

- Regional Sediment Management Practices

- Study Efforts

IMPLEMENTATION TIMING

Timing for implementation is influenced by stakeholder collaboration needed, technical complexity, stakeholder interest, and other factors.

Near-term (< 5 years):

- Less complex
- Significant stakeholder momentum toward implementation, short implementation timeframe
- Maintain and adapt what works, implement ongoing/planned efforts

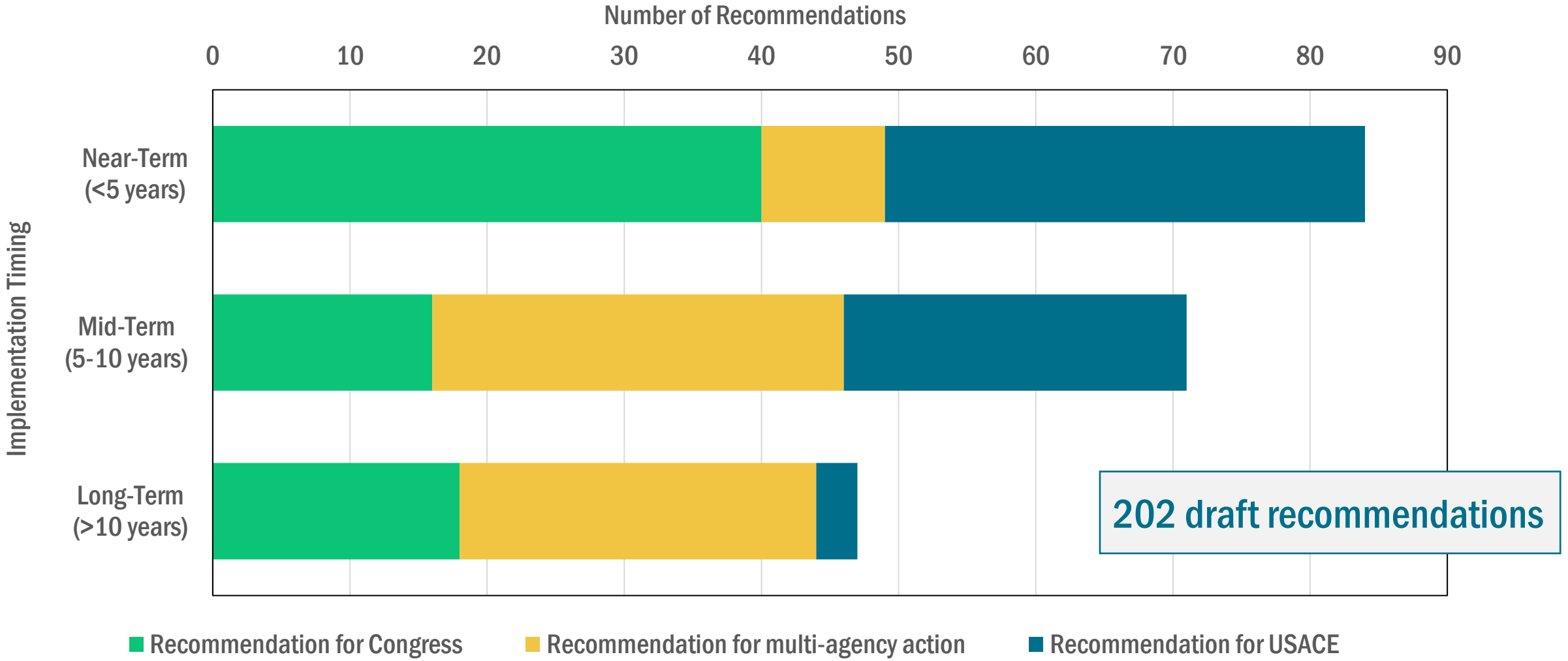
Mid-term (5-10 years) :

- Increased complexity
- Advance and implement emerging efforts

Long-term (> 10 years):

- More complex recommendations requiring significant stakeholder coordination before implementation
- Example: Large scale implementation of changes to land-use, zoning, or building codes

Recommendations for Congress, Multi-Agency Action, and USACE



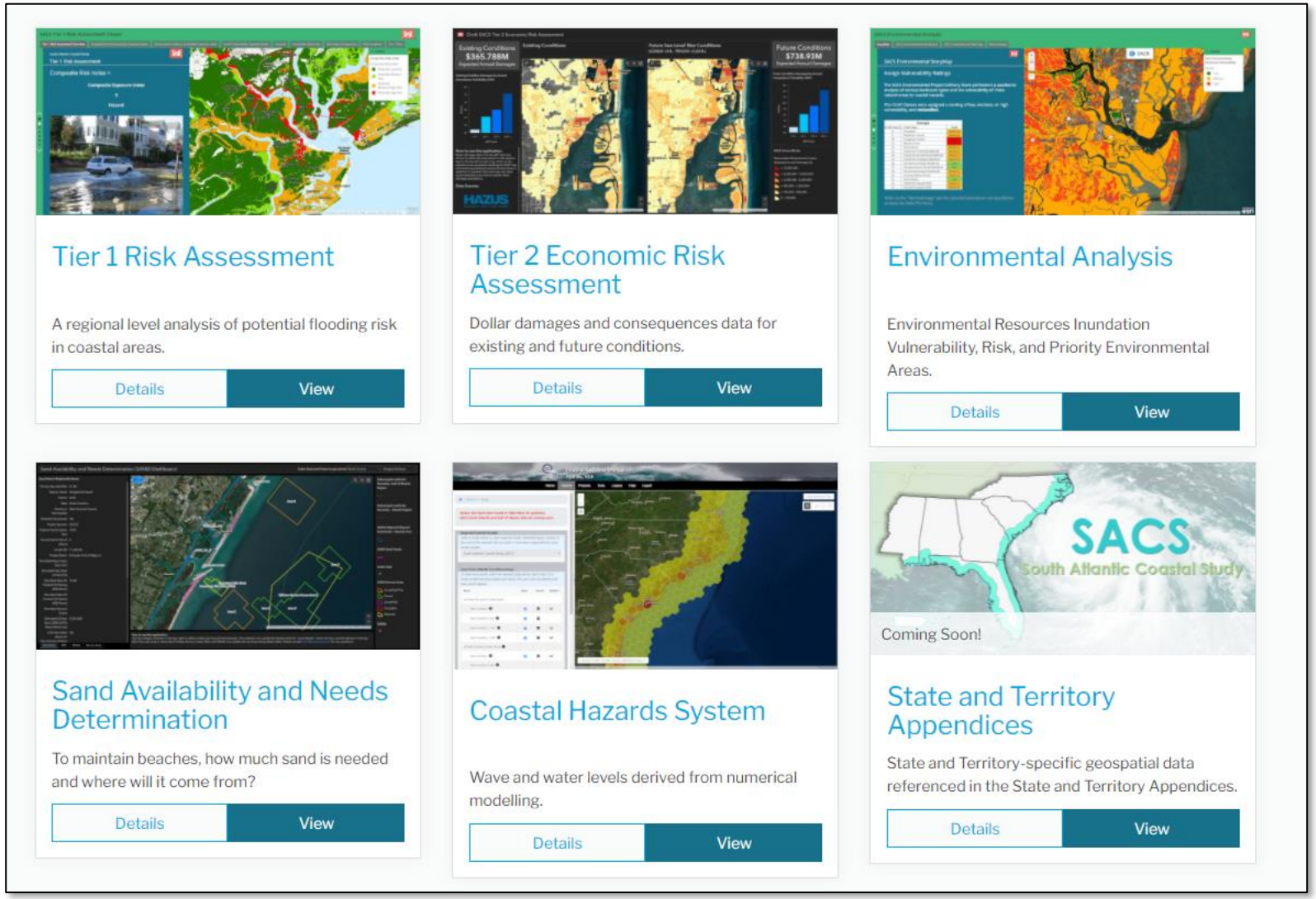
Recommendation Summary Spreadsheet

- Recommendation summary spreadsheet available to download from SACS website
- Able to sort and filter by available categories

Rec ID	Authority Category	Recommendation for	Implementation Timing	State/ Territory	Regional Priority	Recommendation	Description	Next Step to Implementation
1	Activities and Areas Warranting Further Analysis	Recommendation for USACE	Near-Term (<5 years)	All	Regional Priority	Acknowledge and consider environmental benefits as a factor in deciding on a recommended plan in all future CSRM studies that include beach nourishment. Use methods that account for environmental benefits in traditional habitat units and economic quantities (monetized).	Given the significant environmental benefits incidentally provided by many beach nourishment projects, and in accordance with the Assistant Secretary of the Army (Civil Works) policy directive, "Comprehensive Documentation of Benefits in Decision Document," efforts to fully acknowledge and consider environmental benefits as a factor in deciding on a recommended plan should be made in all future CSRM studies that include beach nourishment. Future work should also include methods to account for environmental benefits, not only in traditional habitat units, but also in economic quantities.	guidance/policy
2	Activities and Areas Warranting Further Analysis	Recommendation for USACE	Near-Term (<5 years)	All	Regional Priority	SACS key products should be maintained and updated by USACE and utilized, as applicable, by USACE and stakeholders to support consistent, efficient, and effective analyses.	SACS products can assist project delivery teams more efficiently carry out study efforts by providing a common set of tools and products. Products also provide users and reviewers with a common baseline/understanding to support more efficient and effective analyses and reviews. SACS key products and associated training on their use should be provided within USACE and to interested stakeholders throughout the study area, ideally in joint training with other federal and state agencies incorporating additional tools and products.	funding
3	Activities and Areas Warranting Further Analysis	Recommendation for multi-agency action	Mid-Term (5-10 years)	All	Regional Priority	Advance ongoing interagency work to improve understanding and application of compound flooding effects on existing and future coastal storm risk.	Separate from the SACS, the U.S. Congress has directed the USACE ERDC to collaborate with academia to conduct research into compound flooding. In addition, USACE is partnering with other federal agencies (e.g., NOAA, FEMA, U.S. Geological Survey [USGS]) and other non-governmental agencies. Significant work is required to establish a cohesive framework to proactively manage the risk presented by compound flooding events. At maturity, this framework should provide an encompassing approach to all aspects of compound flooding effects in coastal regions subject to both coastal and pluvial/fluvial flood-risk drivers, updating/developing technical guidance, advancing long-term monitoring of data collection, enhanced numerical modeling, and establishing a robust statistical approach to the coincidence of events that contribute to compound flooding.	stakeholder collaboration

SACS Geoportal

- Provides access to study datasets, products and documentation
- Zoom into datasets of interest
- Download datasets for individual use

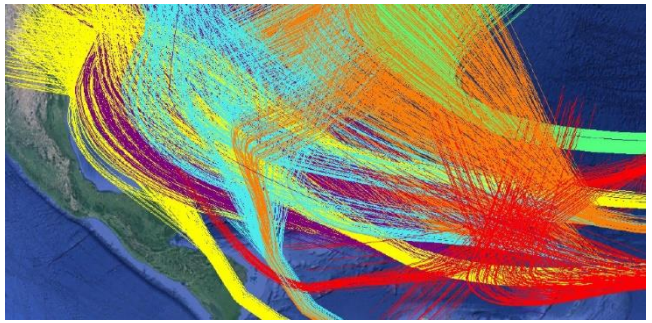


SACS Geoportal
https://data-sacs.opendata.arcgis.com/

Other Appendices

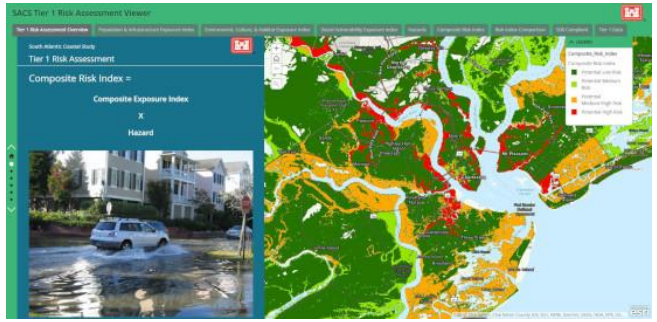
ENGINEERING

- Details risk associated with coastal hazards such as storm surge, wave attack, and erosion under current and future conditions
- Discusses engineering components of the coastal hazards system and sea level change analysis



GEOSPATIAL

- Details the Tier 1 Risk Assessment
- Discusses the geospatial datasets generated to better understand coastal risk, environmental risk, economic damages, and risk reduction efforts across the study area



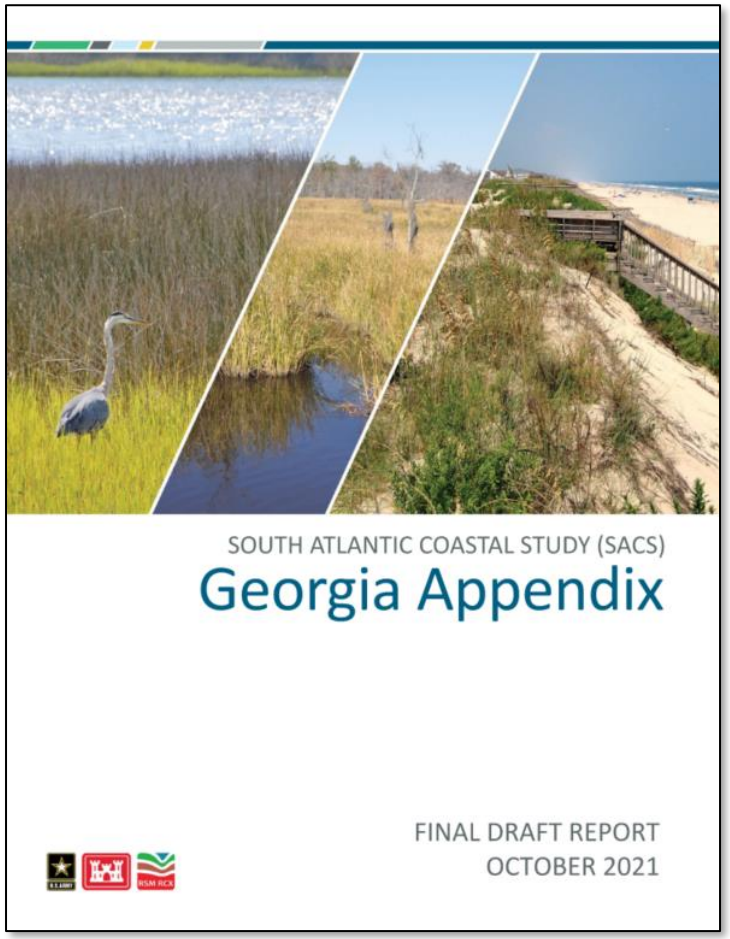
OUTREACH

- Describes the Engagement and Communications Plan which is the framework used for planning and executing communications associated with the SACS
- Details agency collaboration, stakeholder engagement, and communication methods and tools

Questions

(Georgia Appendix up next)

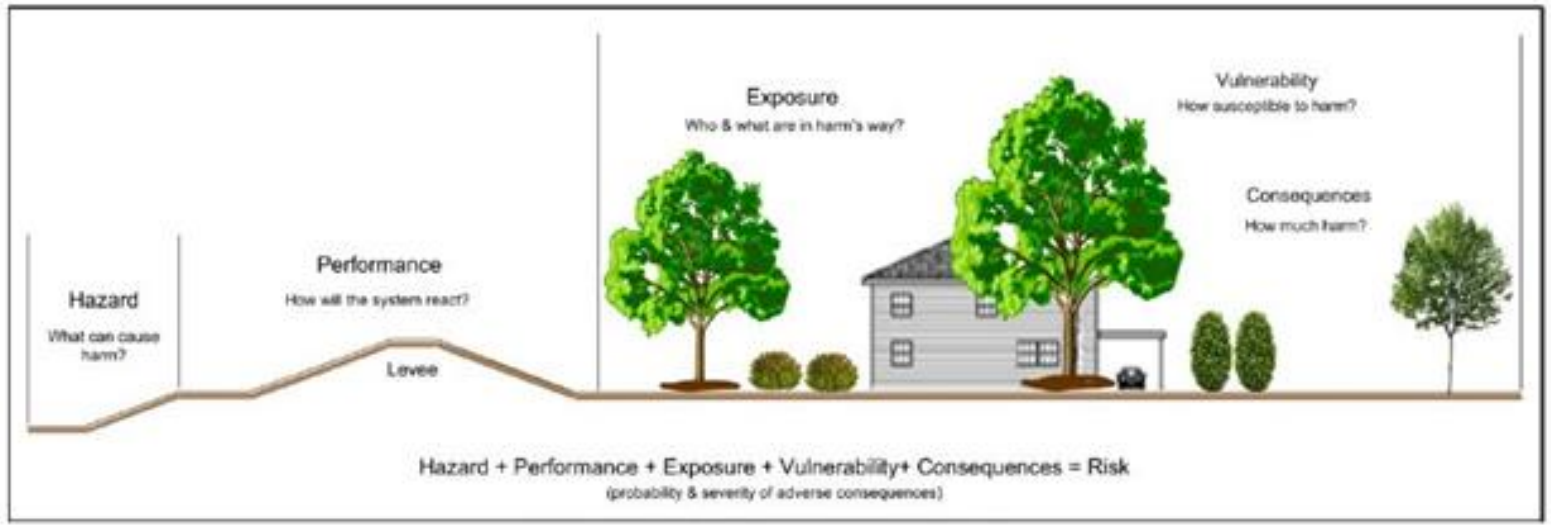
Georgia Appendix Organization



Report Section	Content	CSRM Framework Step
Section 1: Introduction	Objective of the document and organization of the report	**Step 1:** Initiate Analysis
Section 2: Agency Coordination and Collaboration	Overview of the collaborative efforts of the SACS study including stakeholder engagement, workshops, informational sessions, and federal partners	
Section 3: Overview of Existing and Future Conditions	Provides geographic, climatic, and political context for the analysis and an overview of existing and expected future conditions	**Step 2:** Characterize Conditions
Section 4: Risk Assessment	Application of the Tier 1 Risk Assessment and development of the Georgia-specific Tier 2 analysis used to identify high-risk areas	**Step 3:** Analyze Risk and Vulnerability
Section 5: Managing Risk	Overview of resources to support Georgia resiliency efforts, including federal directives, resources, and funding to help communities better leverage needed resources	**Step 4:** Identify Possible Solutions
Section 6: Institutional and Other Barriers	Identification of institutional and other barriers impeding further risk reduction efforts	
Section 7: Recommendations to Address Risks and Vulnerabilities	Recommendations of actions to address the risks identified in Section 4	**Step 5:** Evaluate and compare solutions

Attachments – Focus Area Action Strategies

Section 4 - Risk Assessment



Definitions of risk components as utilized in the SACS include:

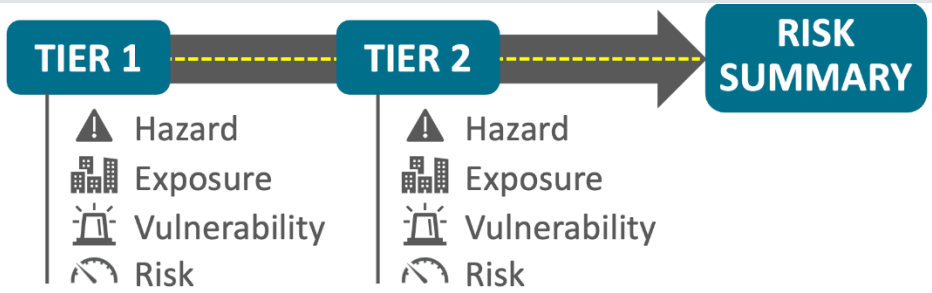
Hazard – In a general sense, hazard is anything that is a potential source of harm to a valued asset (human, animal, natural, economic, and social)

Exposure – Describes who and what may be harmed by the flood hazard. Exposure incorporates a description of where the flooding occurs at a given frequency, and what assets exist in that area.

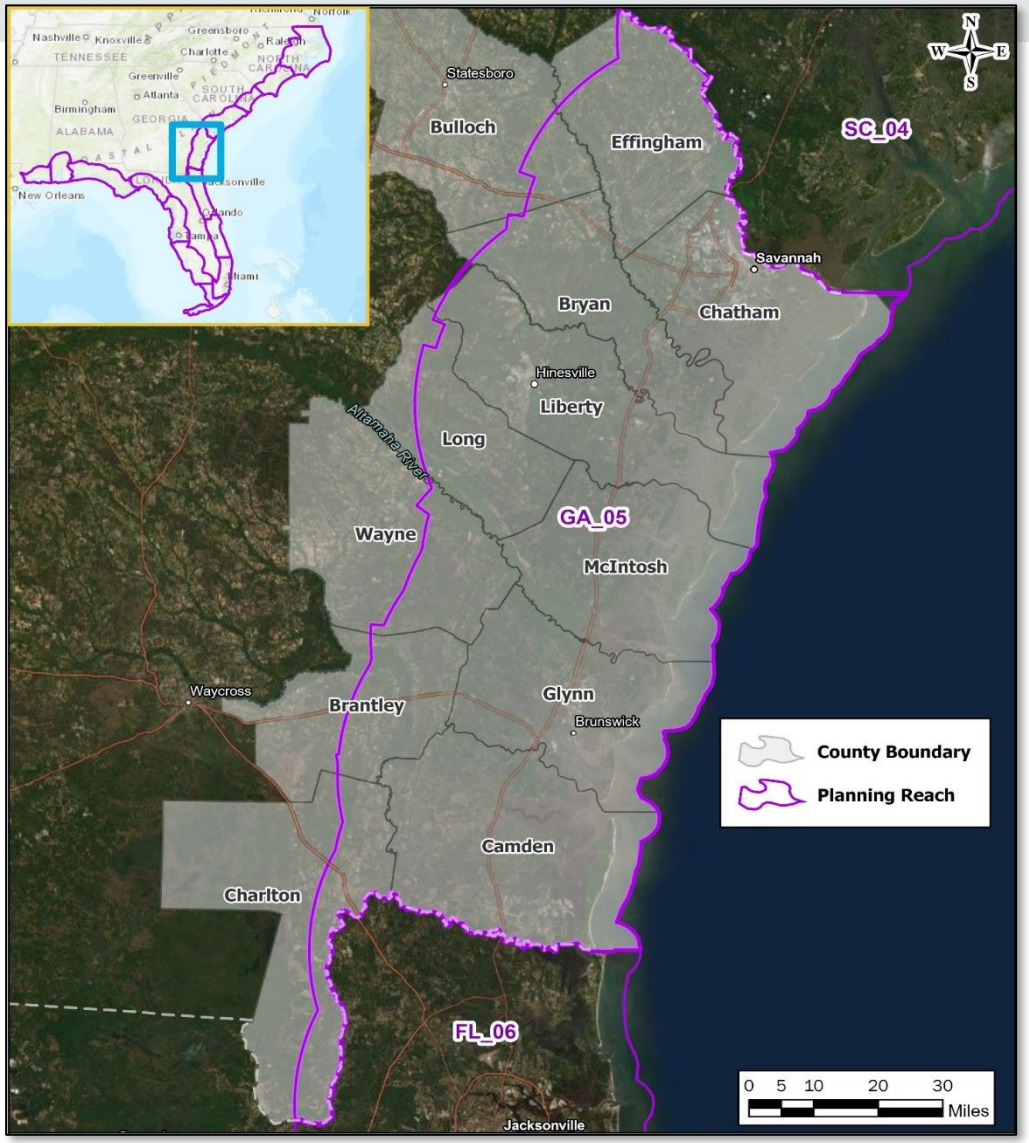
Vulnerability – Susceptibility of harm to human beings, property, and the environment when exposed to a hazard. Depth-damage functions, depth-mortality functions, and other similar relationships can be used to describe vulnerability.

Risk – Combination of likelihood and harm to people, property, infrastructure, and other assets.

Section 4 - Risk Assessment



- Analysis performed per planning reach
  - **Tier 1:** summary of findings from the consistent assessment across study area
  - **Tier 2:** more refined state-specific assessment
    - Economic risk
    - Risk to environmental resources
    - Risk to cultural resources



Georgia Specific Findings – By the numbers

22 - Tier 1 High-Risk locations/census places with sea level rise

> 400,000 – people exposed to storm surge hazards in existing conditions (CAT 5 MOM)

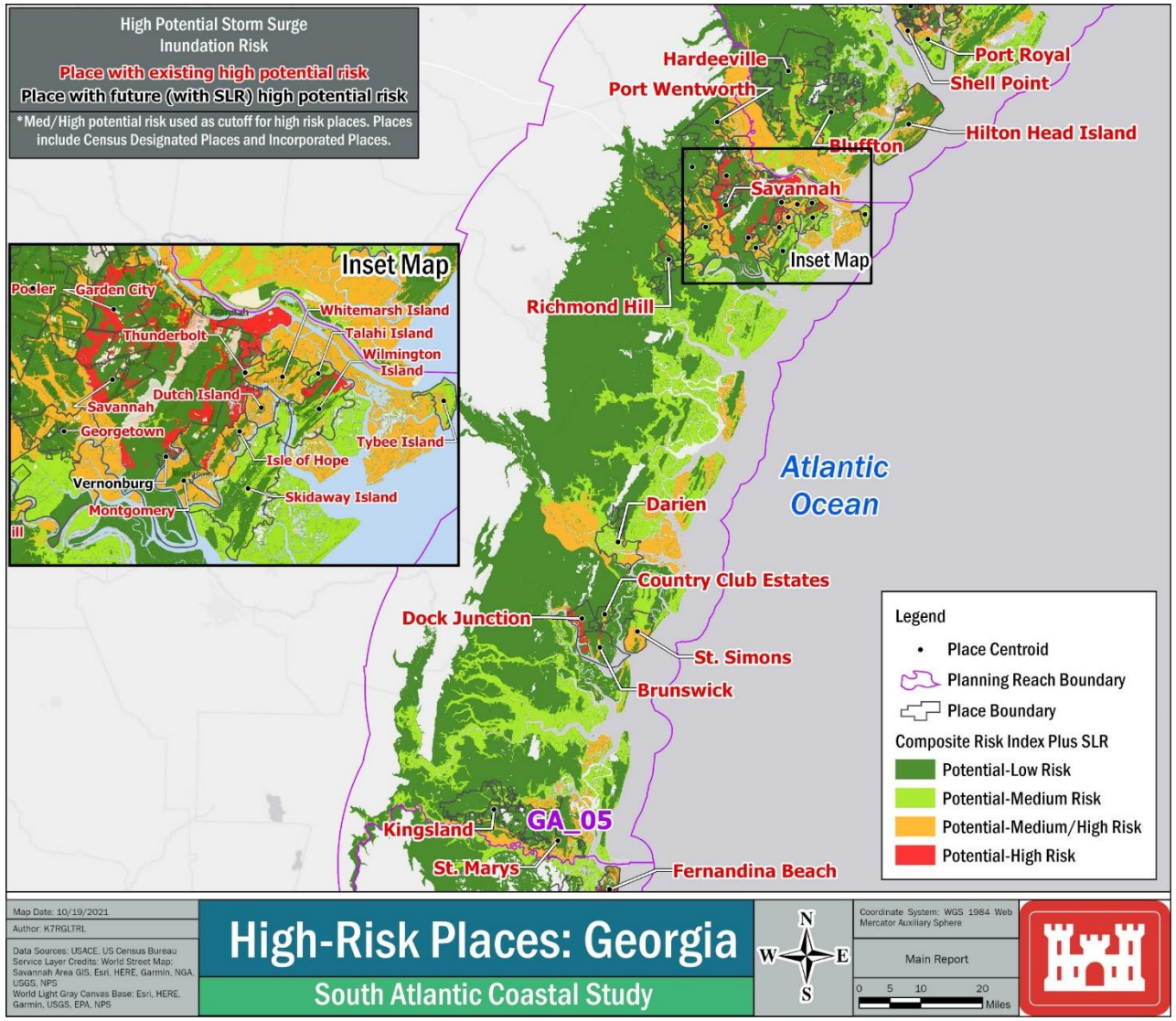
$131 million - estimated annual damages in existing conditions

$381 million - estimated annual damages in future conditions with sea level rise

25 - Priority Environmental Areas identified

5,700 - Cultural resources exposed to risk under future conditions with sea level rise

Tier 1 Risk Assessment



Census Places	Total Acres	No Sea Level Rise (Acres)	With Sea level Rise (Acres)	Change (Acres)	Percent Change
Savannah	69,501	6,568	9,711	3,143	47.85%
St. Simons	11,208	4,036	5,037	1,001	24.80%
St. Marys	15,998	2,727	3,768	1,040	38.17%
Garden City	9,267	2,185	3,593	1,408	64.44%
Darien	15,378	2,789	2,803	14	0.50%
Georgetown	5,658	1,897	2,429	532	28.04%
Port Wentworth	10,520	1,343	2,338	995	74.09%
Whitemarsh Island	4,258	1,842	2,313	471	25.57%
Montgomery	3,894	1,739	1,998	259	14.89%
Brunswick	16,169	1,454	1,968	514	35.35%
Dock Junction	6,766	929	1,606	677	72.87%
Pooler	17,836	561	1,592	1,031	183.78%
Dutch Island	1,960	1,149	1,248	98	8.62%
Richmond Hill	10,460	750	1,120	370	49.33%
Wilmington Island	6,100	855	1,019	164	19.18%
Isle of Hope	1,459	424	669	246	57.78%
Kingsland	28,688	287	599	312	108.71%
Tybee Island	1,951	465	509	44	9.46%
Thunderbolt	1,020	402	489	87	21.64%
Country Club Estates	3,043	195	289	94	48.21%
Talahi Island	939	213	220	7	3.29%
Skidaway Island	11,436	83	87	4	4.82%
Vernonburg	269	0	65	65	∞

Tier 2 Economic Risk Assessment

State/Territory Name

Georgia

$131M Existing Risk (EAD)

$381M Future Risk (EAD)

Risk by Focus Area (EAD)

City of Savannah / Chatham County

$71,820,000 Existing Risk (EAD)

$197,910,000 Future Risk (EAD)

Brunswick / Glynn County

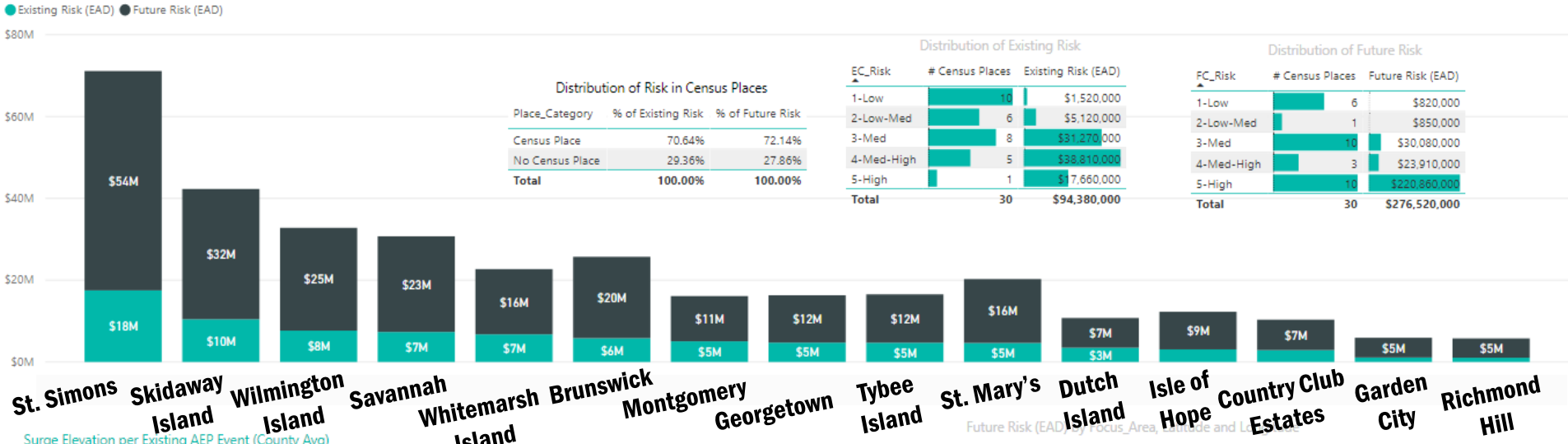
$37,890,000 Existing Risk (EAD)

$117,590,000 Future Risk (EAD)

Existing & Future Risk (EAD) by County

County	Existing Risk (EAD)	Future Risk (EAD)
Chatham	$71,770,000	$197,780,000
Glynn	$37,890,000	$117,590,000
Camden	$8,760,000	$27,350,000
Bryan	$4,940,000	$15,970,000
Liberty	$4,500,000	$14,400,000
McIntosh	$3,610,000	$8,050,000
Brantley	$0	$0
Charlton	$0	$0
Total	**$131,470,000**	**$381,140,000**

Existing & Future Risk (EAD) by Census Place (Top 15)



Distribution of Risk in Census Places

Place_Category	% of Existing Risk	% of Future Risk
Census Place	70.64%	72.14%
No Census Place	29.36%	27.86%
Total	**100.00%**	**100.00%**

Distribution of Existing Risk

EC_Risk	# Census Places	Existing Risk (EAD)
1-Low	10	$1,520,000
2-Low-Med	6	$5,120,000
3-Med	8	$31,270,000
4-Med-High	5	$38,810,000
5-High	1	$17,660,000
Total	**30**	**$94,380,000**

Distribution of Future Risk

FC_Risk	# Census Places	Future Risk (EAD)
1-Low	6	$820,000
2-Low-Med	1	$850,000
3-Med	10	$30,080,000
4-Med-High	3	$23,910,000
5-High	10	$220,860,000
Total	**30**	**$276,520,000**

Surge Elevation per Existing AEP Event (County Avg)

Coastal Counties	EC_10Yr	EC_50Yr	EC_100Yr	EC_500Yr
Bryan	6.00	8.3	9.4	11.6
Camden	5.70	7.8	8.9	10.9
Chatham	6.10	8.4	9.6	11.8
Glynn	5.70	7.8	8.9	10.9
Liberty	6.00	8.3	9.4	11.6
McIntosh	5.90	8.1	9.2	11.3

Surge Elevation per Future AEP Event (County Avg)

Coastal Counties	FC_10Yr	FC_50Yr	FC_100Yr	FC_500Yr
Bryan	9.0	11.3	12.4	14.6
Camden	8.7	10.8	11.9	13.9
Chatham	9.1	11.4	12.6	14.8
Glynn	8.7	10.8	11.9	13.9
Liberty	9.0	11.3	12.4	14.6
McIntosh	8.9	11.1	12.2	14.3

Existing AEP Event Consequences by Focus_Area

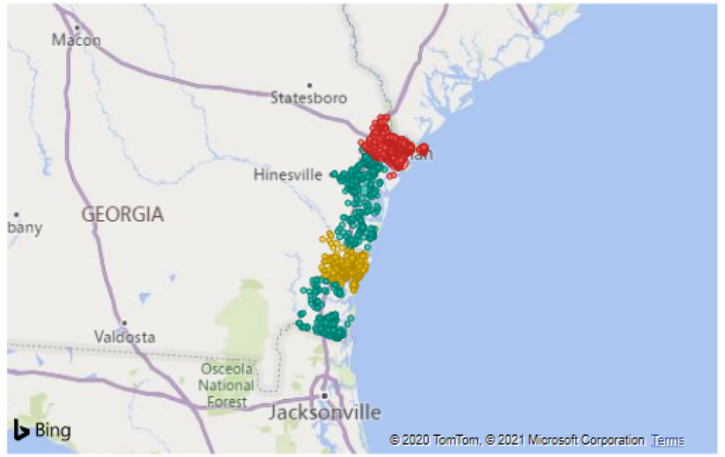
Focus_Area	EC_DL_10Yr	EC_DL_50Yr	EC_DL_100Yr	EC_DL_500Yr
City of Savannah / Chatham County	$307,840,000	$766,140,000	$1,205,400,000	$2,504,910,000
Brunswick / Glynn County	$139,988,000	$419,650,000	$628,710,000	$1,425,740,000

Future AEP Event Consequences by Focus_Area

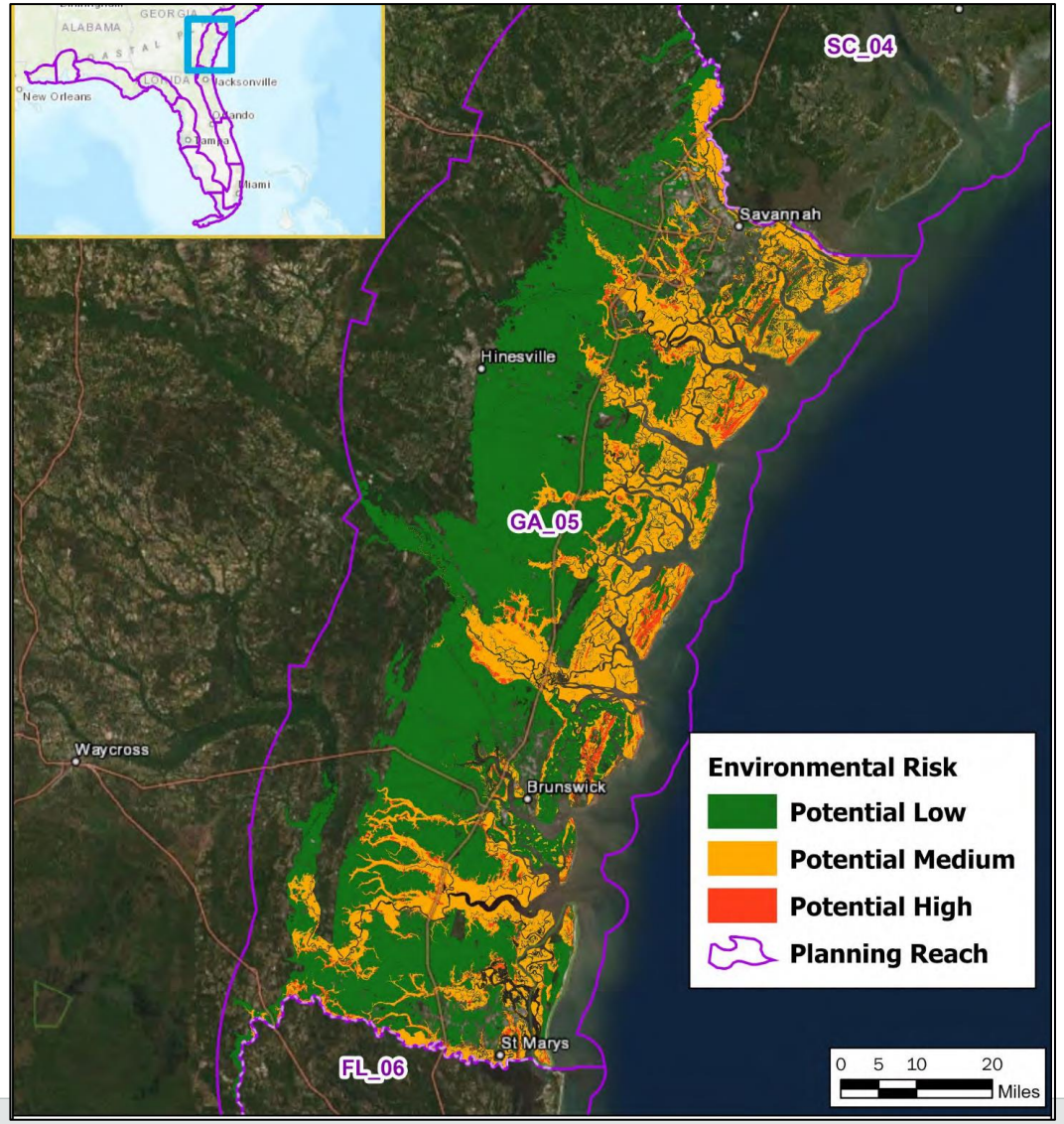
Focus_Area	FC_DL_10Yr	FC_DL_50Yr	FC_DL_100Yr	FC_DL_500Yr
City of Savannah / Chatham County	$992,990,000	$2,208,890,000	$3,201,900,000	$5,137,960,000
Brunswick / Glynn County	$580,390,000	$1,355,590,000	$1,872,770,000	$2,853,790,000

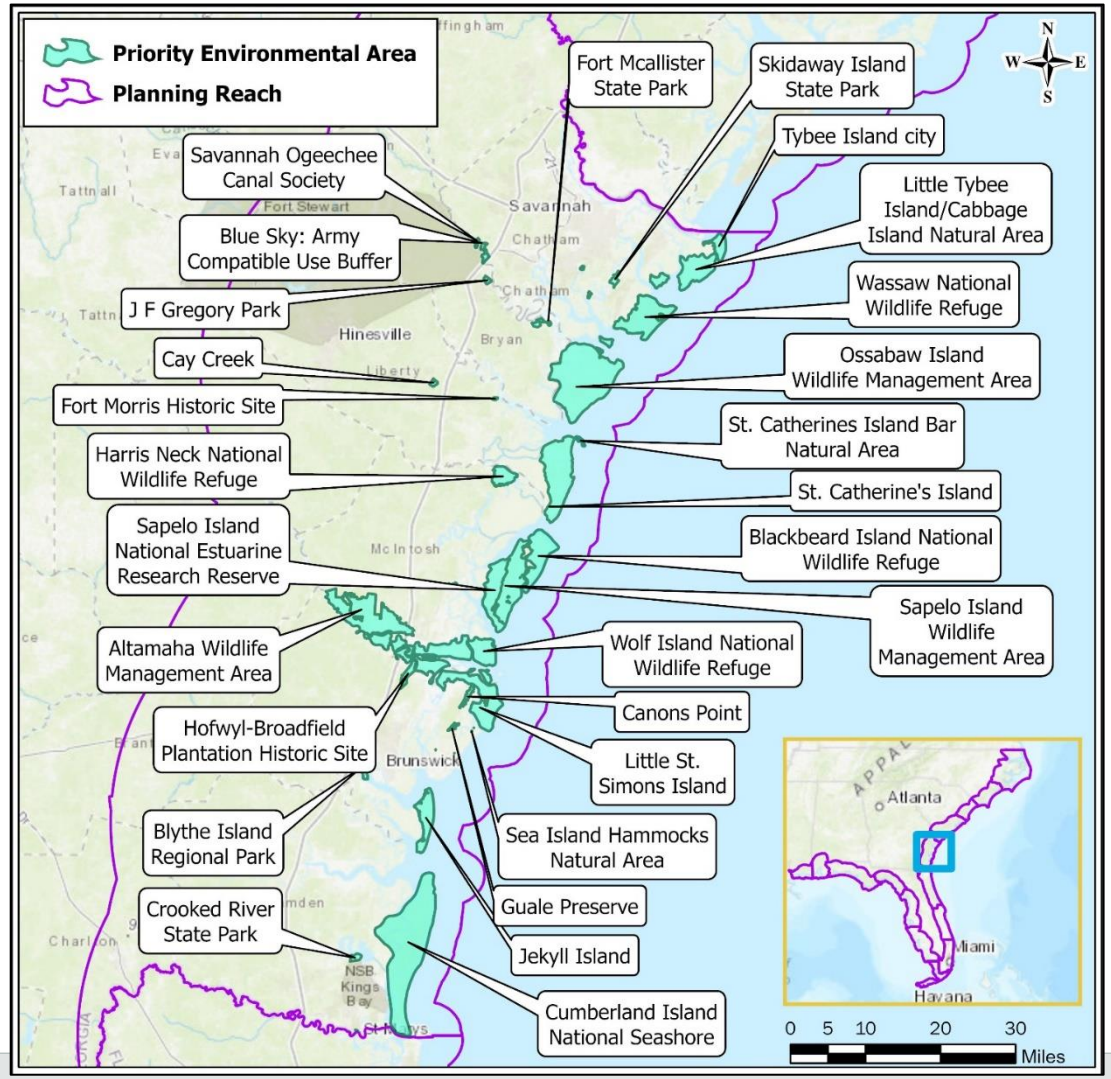
Future Risk (EAD) by Focus_Area, Latitude and Longitude

Focus_Area (Blank) Brunswick / Glynn County City of Savannah / Chatham County



Priority Environmental Areas





Cultural Resources

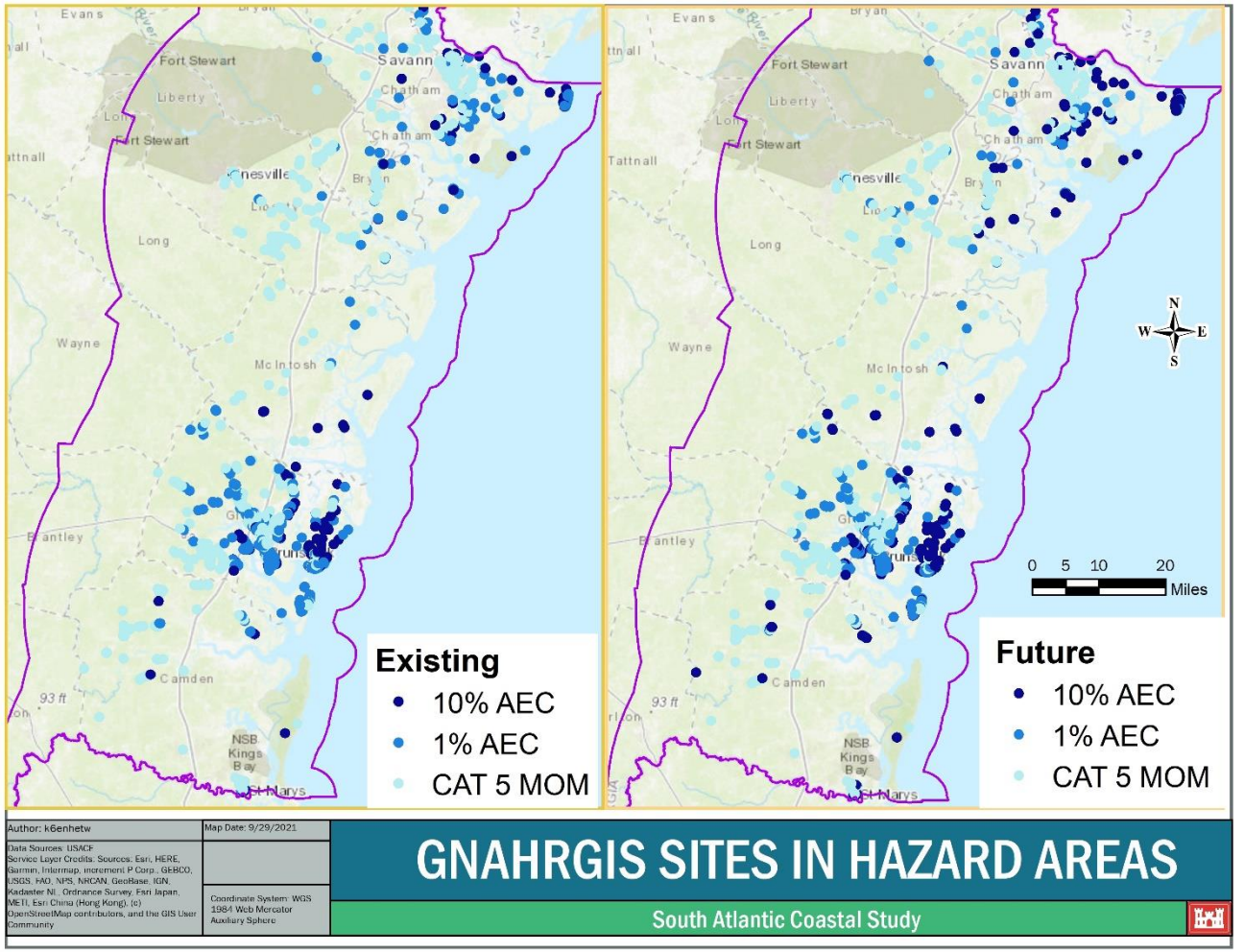
Exposed Archaeological Sites

County	Existing Exposure Number of Sites			Future Exposure (3-Foot Sea Level Rise) Number of Sites		
	1-Percent AEP	10-Percent AEP	10-Percent and 1-Percent AEP Totals (per county)	1-Percent AEP	10-Percent AEC	10-Percent and 1-Percent AEP Totals (per county)
Camden	157	76	233	61	208	269
Chatham	340	573	913	187	761	948
Glynn	210	90	300	165	143	308
Liberty	86	131	217	84	152	236
McIntosh	98	122	220	51	191	242
Total	891	992	1,883	548	1,455	2,003

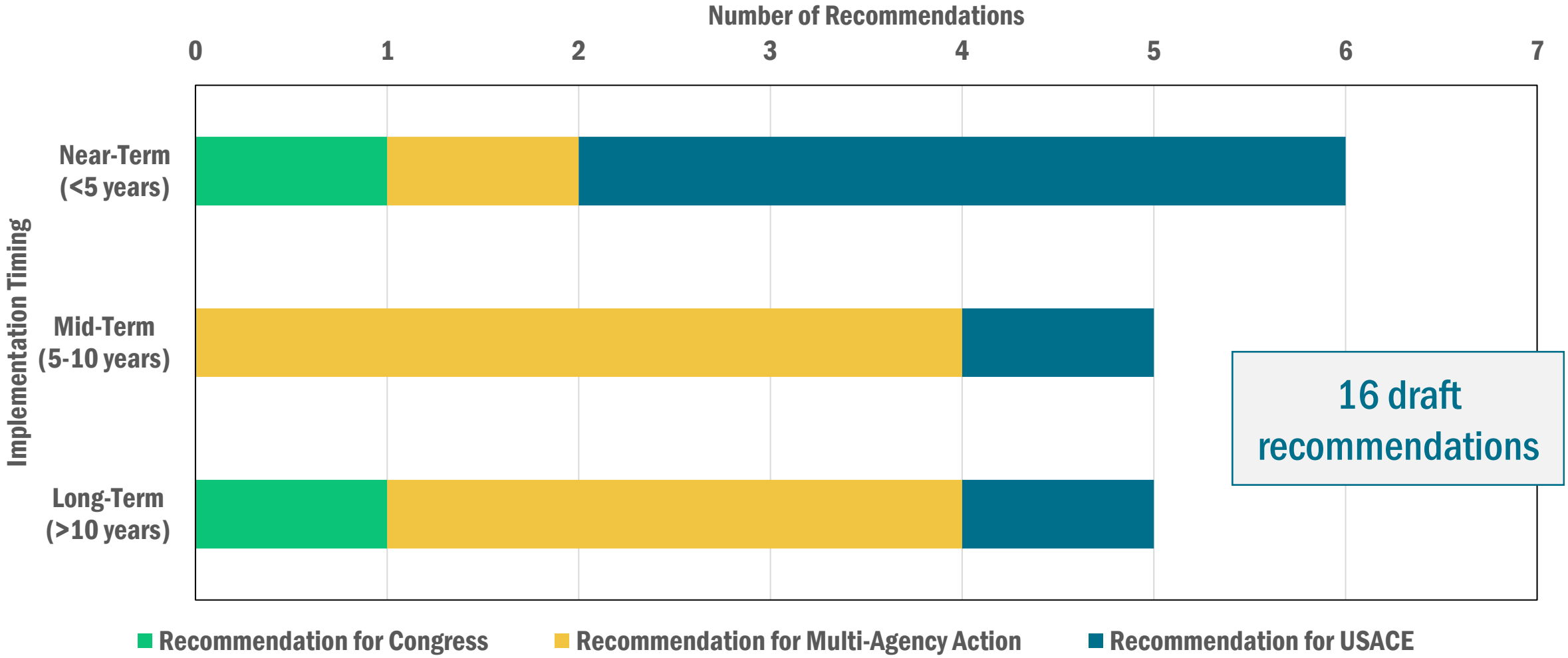
Exposed Historic Resources

County	Existing Exposure Number of Sites			Future Exposure (3-Foot Sea Level Rise) Number of Sites		
	1-Percent AEP	10-Percent AEP	10-Percent and 1-Percent AEP Totals (per county)	1-Percent AEP	10-Percent AEP	10-Percent and 1-Percent AEP Totals (per county)
Camden	92	22	114	23	119	142
Chatham	461	157	618	281	353	634
Glynn	2,523	285	2,808	2,292	591	2,883
Liberty	12	0	12	12	6	18
McIntosh	8	13	21	7	14	21
Total	3,096	477	3,573	2,615	1,083	3,698

- More than 5,700 exposed cultural and historic resources under future conditions with 3 feet of sea level rise.



Section 7 - Georgia Recommendations



Georgia State Priority Recommendations

Authority Category	Implementation Timing	Recommendation For	Recommendation	Description
Recommendations on Previously Authorized USACE Construction Projects	Near-Term (<5 years)	Congress	Renew federal participation in Tybee Island Coastal Storm Risk Management	The current authorization for federal participation in the Tybee Island Georgia Shore Protection Project is anticipated to end in 2024. Alternatives for continued protection of Tybee Island should be evaluated, including the potential to expand the current project footprint to include new areas at risk from coastal storms and sea level rise such as the North Beach, back bay areas, and U.S. Highway 80. To implement this recommendation, a non-federal sponsor (such as the City of Tybee Island) would need to request participation from USACE. Continued collaboration to discuss these opportunities is recommended.
Regional Sediment Management Practices	Near-Term (<5 years)	USACE	Sustain and expand Atlantic Intracoastal Waterway (AIWW) operation and maintenance efforts to characterize and beneficially use dredged material	Near-shore and non-beach quality dredged material within the focus area should be beneficially used when feasible. Current USACE RSM efforts include a study to characterize shoaled material and identify appropriate beneficial uses of dredged sediment along the AIWW. A consistent inventory of material quality and suitability should be shared with stakeholders to promote beneficial use of the dredged material.
Study Efforts	Long-Term (>10 years)	Congress	Establish federal participation in St. Simons Island Coastal Storm Risk Management	Conduct a study to evaluate alternatives for coastal storm risk management at St. Simons Island. This study would complement on-going studies and actions in the focus area which includes a two-phase county wide Shoreline Assessment and Implementation Resiliency Plan and the repair of the historic ocean-facing rock revetment known as the Johnson Rocks. To implement this recommendation, a non-federal sponsor (such as Glynn County) would need to request participation from USACE. Continued collaboration to discuss these opportunities is recommended.
Activities and Areas Warranting Further Analysis	Near-Term (<5 years)	Multi-Agency Action	Improve risk communication in Glynn County	Promote community-based education on coastal storm risks and sea level rise within Glynn County. Engage stakeholders using the publicly available SACS tools (e.g., Geoportal, Tier 2 Economic Risk Assessment) to assist in risk communication, and the SACS Coastal Program Guide to locate additional opportunities for funding. Potential lead stakeholders would include the Brunswick-Glynn County Emergency Management Agency and local governments. This recommendation is applicable throughout all coastal counties in the planning reach
Address Barriers Preventing Comprehensive Risk Management	Mid-Term (5-10 years)	Multi-Agency Action	Evaluate coastal storm risk management benefits to cultural resources and socially vulnerable communities in accordance with WRDA 2020, Section 116	The Pinpoint museum and adjacent properties in a historic Gullah/Geechee neighborhood experience reoccurring flooding issues from storm surge which will increase with sea level rise. USACE should initiate a study to evaluate coastal storm risk management that incorporates January 2021 guidance requiring USACE to estimate benefits more equitably for Regional Economic Development (RED) and Other Social Effects (OSE).

Questions

(Focus Areas up next)

SACS Focus Areas

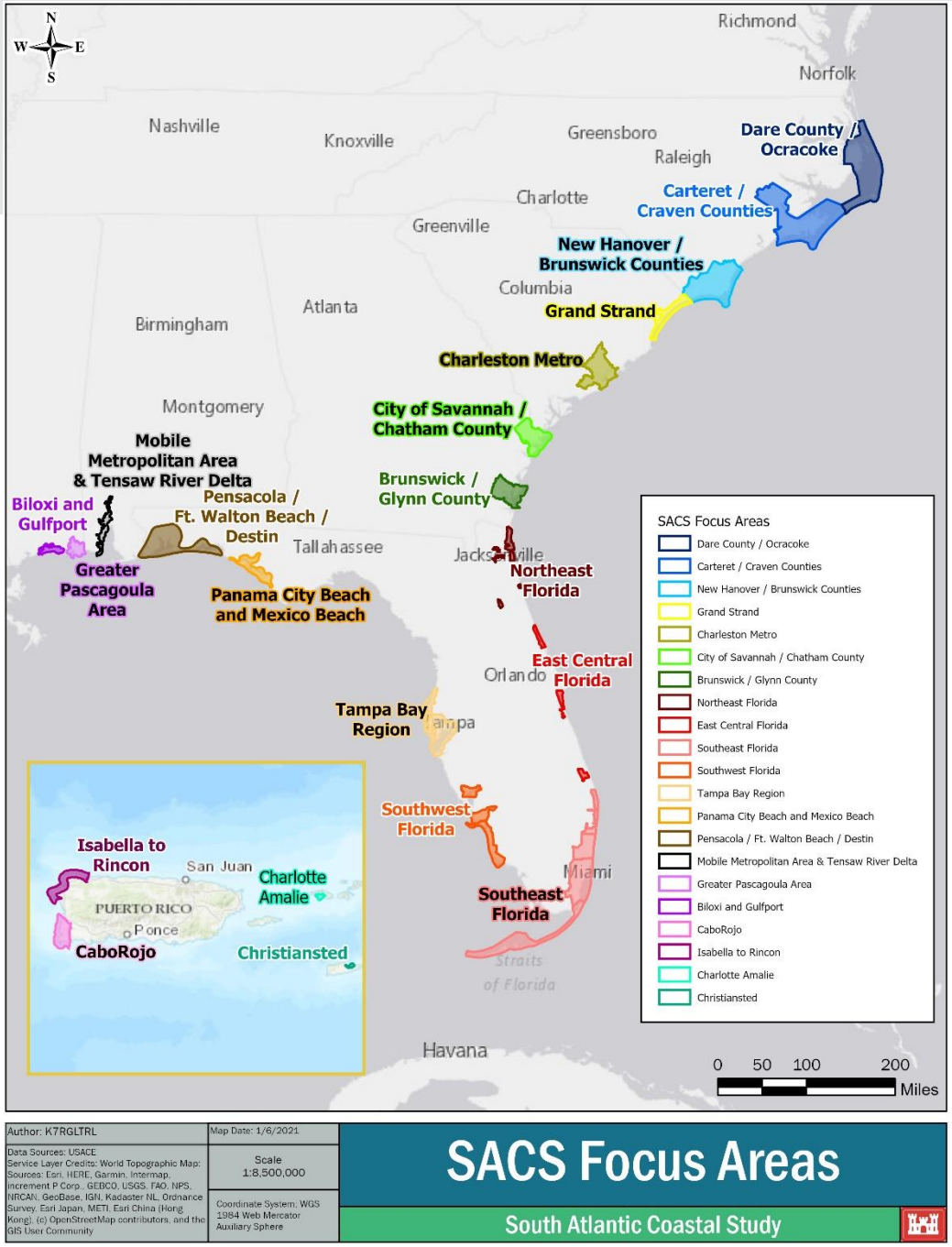
"…a report recommending specific and detailed actions to address the risks and vulnerabilities…" -WRDA'16, Sec. 1204

Focus Areas:

- Represent areas of highest risk
- Serve as examples of how Framework can be applied in other high-risk locations

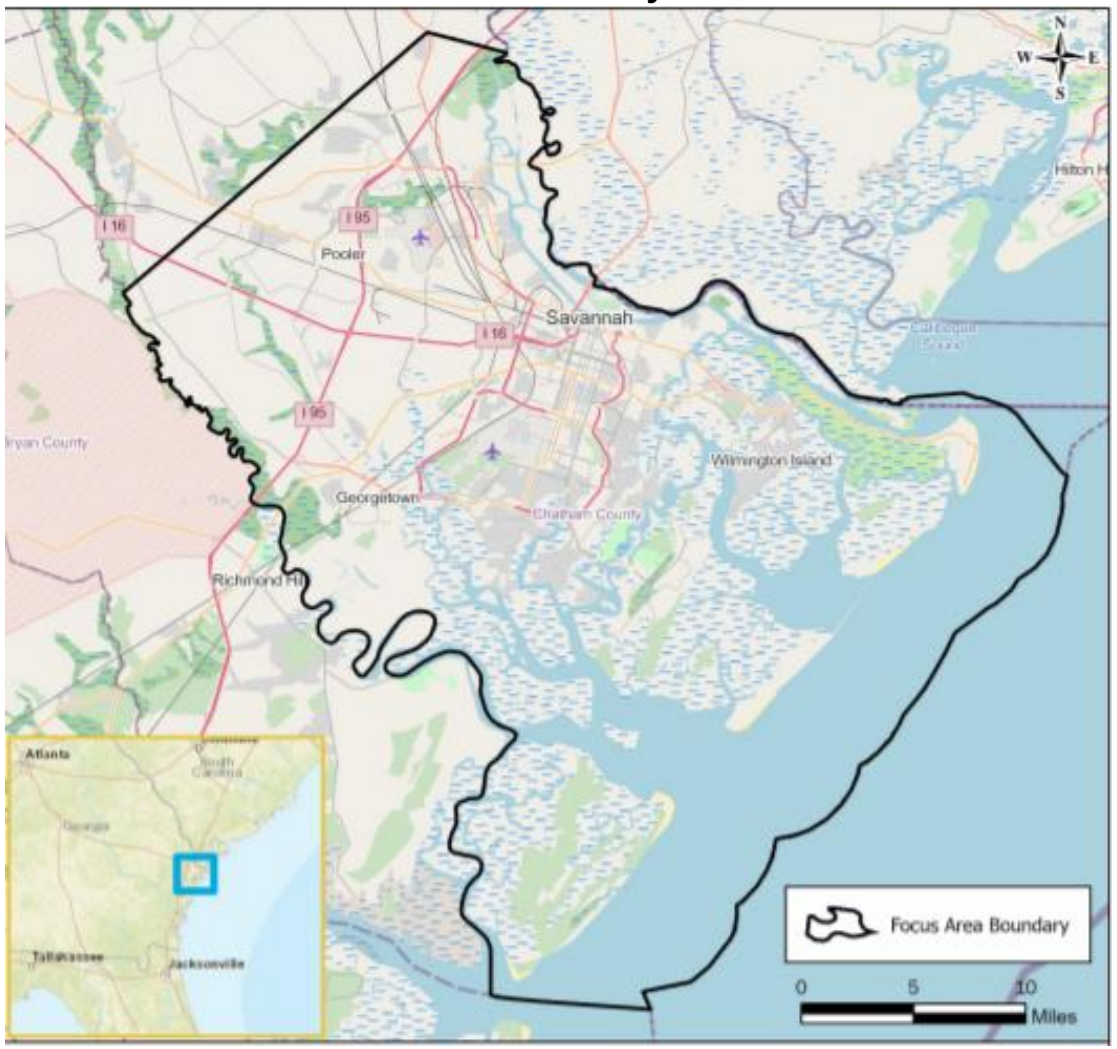
- Twenty-one focus areas throughout the study area
- Minimum of one focus area in each state/territory

- Focus Area Action Strategies developed for each focus area using SACS key products and multiple agencies' tools

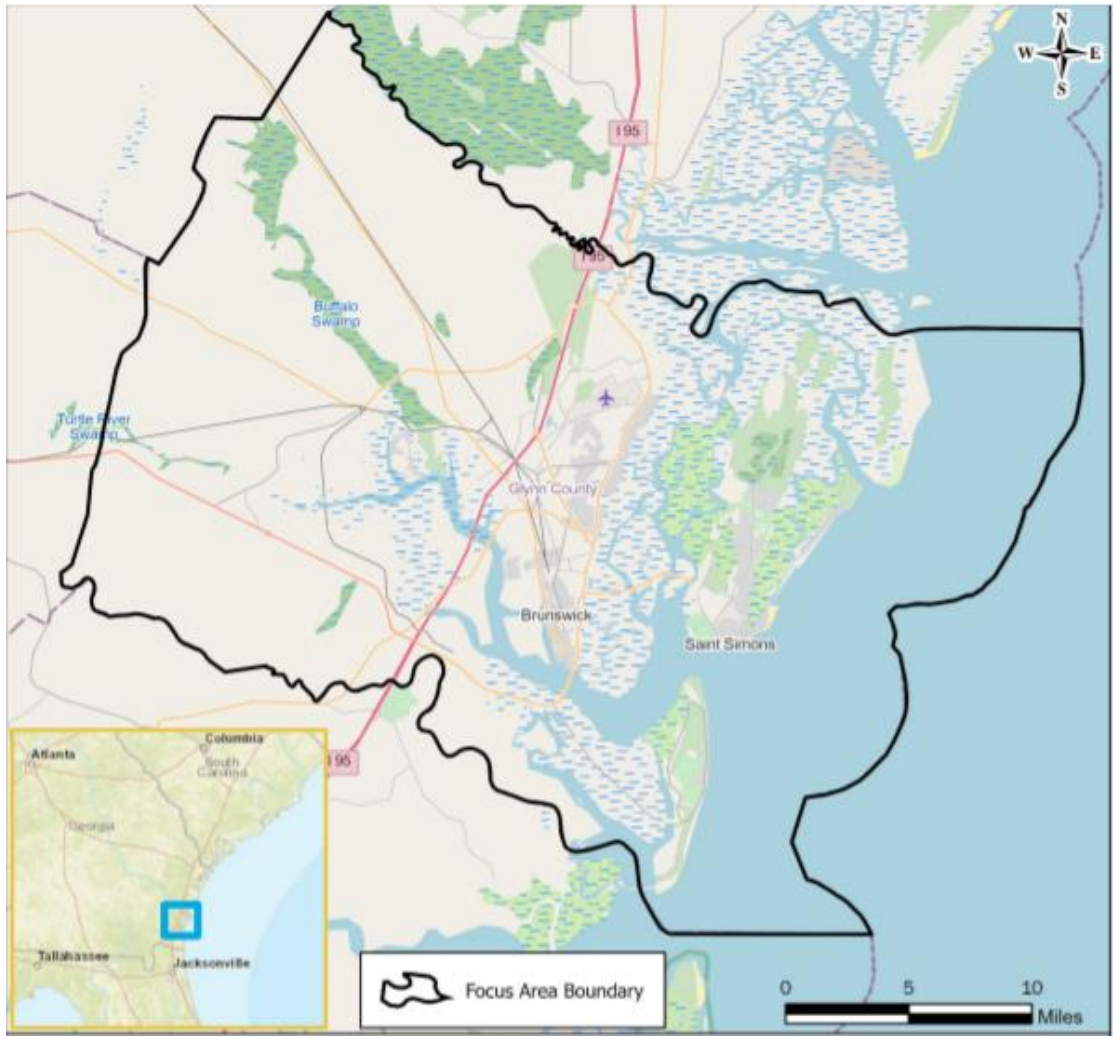


Georgia Focus Areas

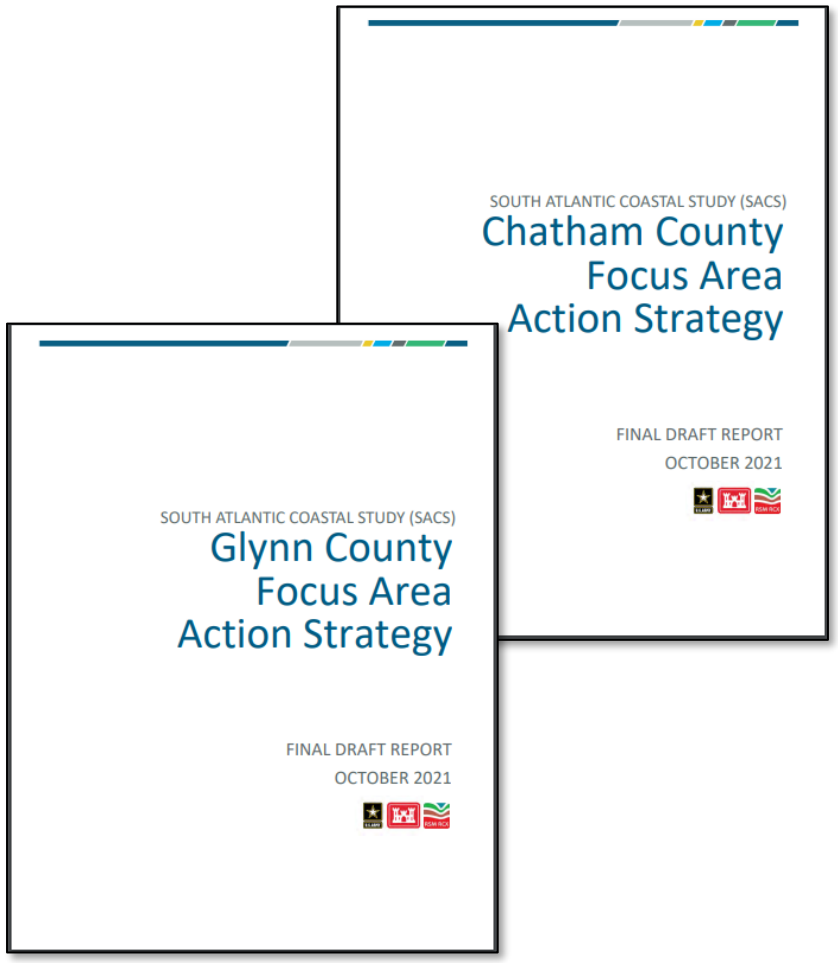
Chatham County



Glynn County



Focus Area Action Strategy Organization



Section 1 – Introduction

Section 2 – Problems and Opportunities

Section 3 – Objectives and Constraints

Section 4 – Existing and Future Conditions

Section 5 – Action Strategy Development

Section 6 – Recommendations

Chatham County Focus Area Specific Findings – By the numbers

12 - Tier 1 High-Risk locations/census places with sea level rise

87% – population exposed to storm surge hazards in existing conditions (CAT 5 MOM)

$72 million - estimated annual damages in existing conditions

$198 million - estimated annual damages in future conditions with sea level rise

7 - Priority Environmental Areas identified

1,582 - Cultural and historic resources exposed to risk under future conditions with sea level rise

25-50% - Projected increase in population within Savannah Metro area from 2020 to 2100 (ICLUS)

Glynn County Focus Area Specific Findings – By the numbers

4 - Tier 1 High-Risk locations/census places with sea level rise

97% – population exposed to storm surge hazards in existing conditions (CAT 5 MOM)

$38 million - estimated annual damages in existing conditions

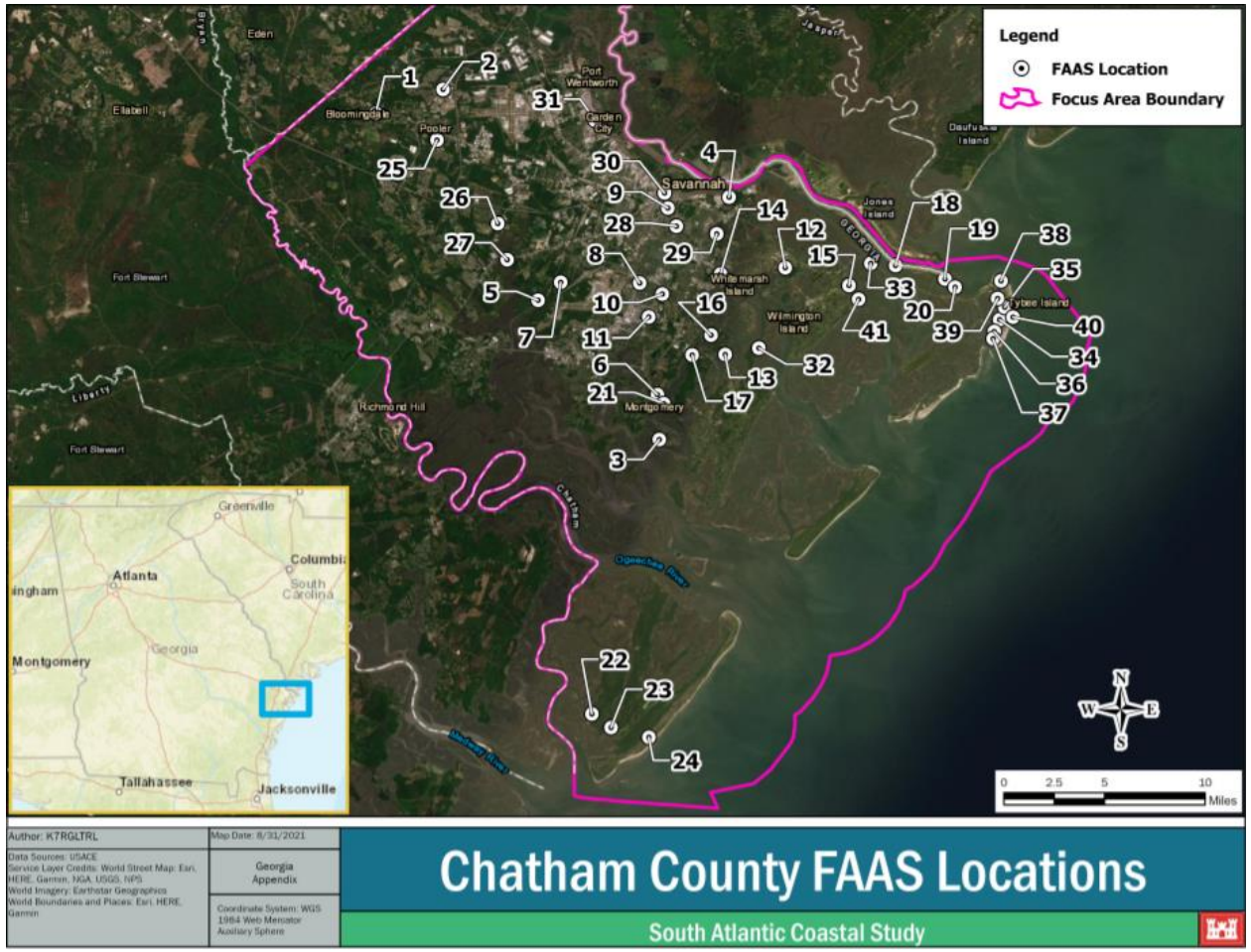
$118 million - estimated annual damages in future conditions with sea level rise

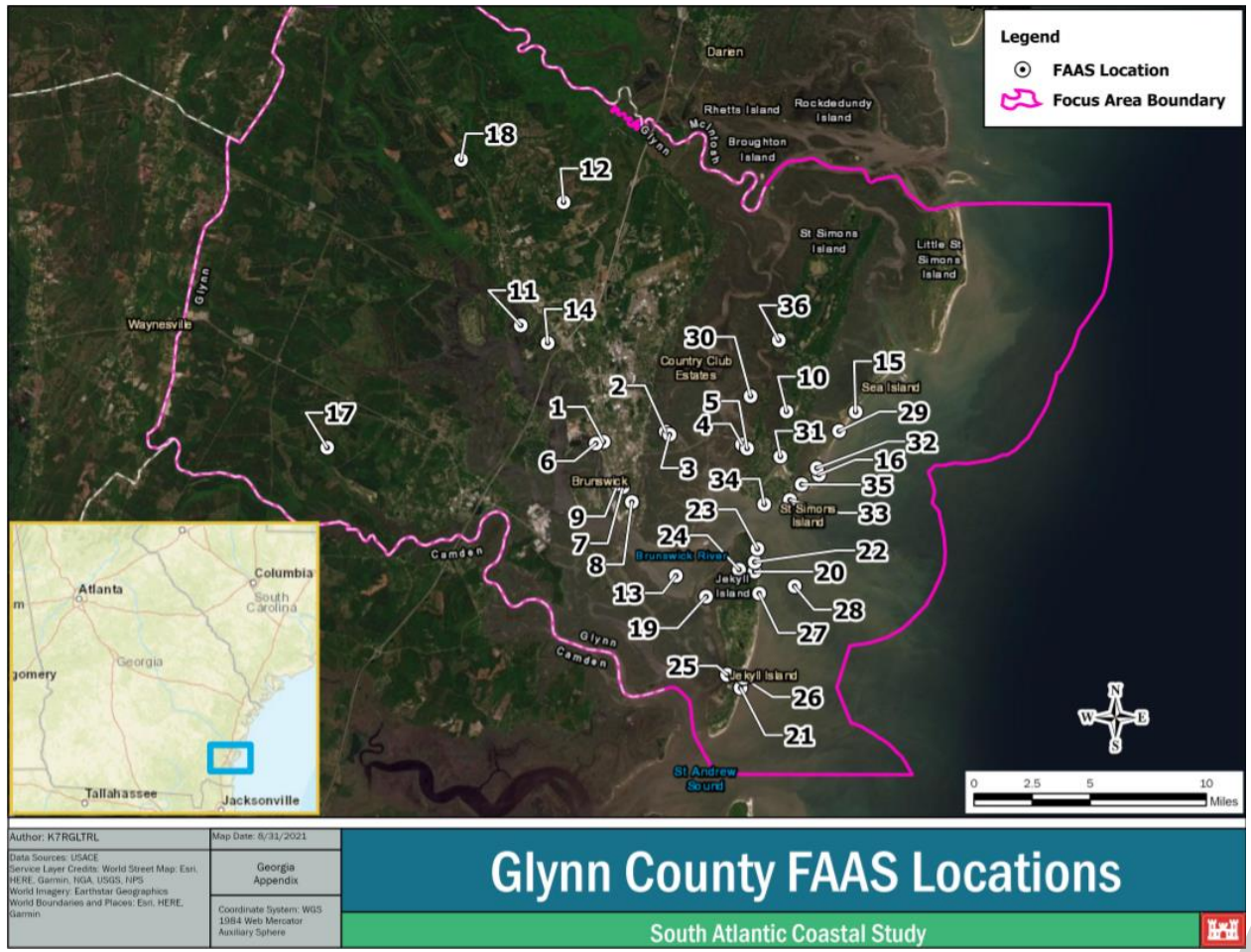
6 - Priority Environmental Areas identified

3,200- Cultural and historic resources exposed to risk under future conditions with sea level rise

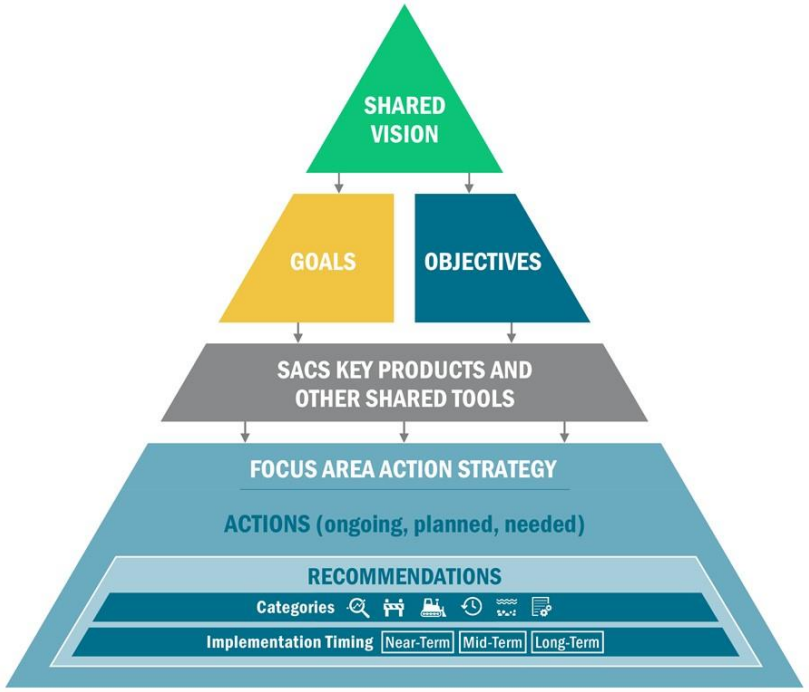
> 100% - Projected increase in population within Brunswick Metro area from 2020 to 2100 (ICLUS)

Georgia Focus Area Identified Action Locations





Focus Area Action Strategy – Chatham County Recommendations



- Renew federal participation in Tybee Island shore protection
- Beneficially use dredged material on Tybee Island North Beach
- Beneficially use dredged material on McQueen's Trail
- Sustain and increase efforts to acquire and raise repetitive loss properties
- Expand the Smart Sea Level Sensors Project
- Perform a comprehensive drainage improvements study in the City of Savannah
- Perform a county-wide assessment of road flooding
- Protect and preserve coastal wetlands

Focus Area Action Strategy – Glynn County Recommendations

- Initiate federal participation in St. Simons Island shoreline protection
- Beneficially use dredged material on the north shore of Jekyll Island
- Sustain and expand a pilot-study to characterize dredged sediment in the AIWW for beneficial use
- Expand the Community Rating System Explorer Application to Glynn County
- Improve risk communication
- Perform a county-wide assessment of road flooding
- Protect and preserve coastal wetlands

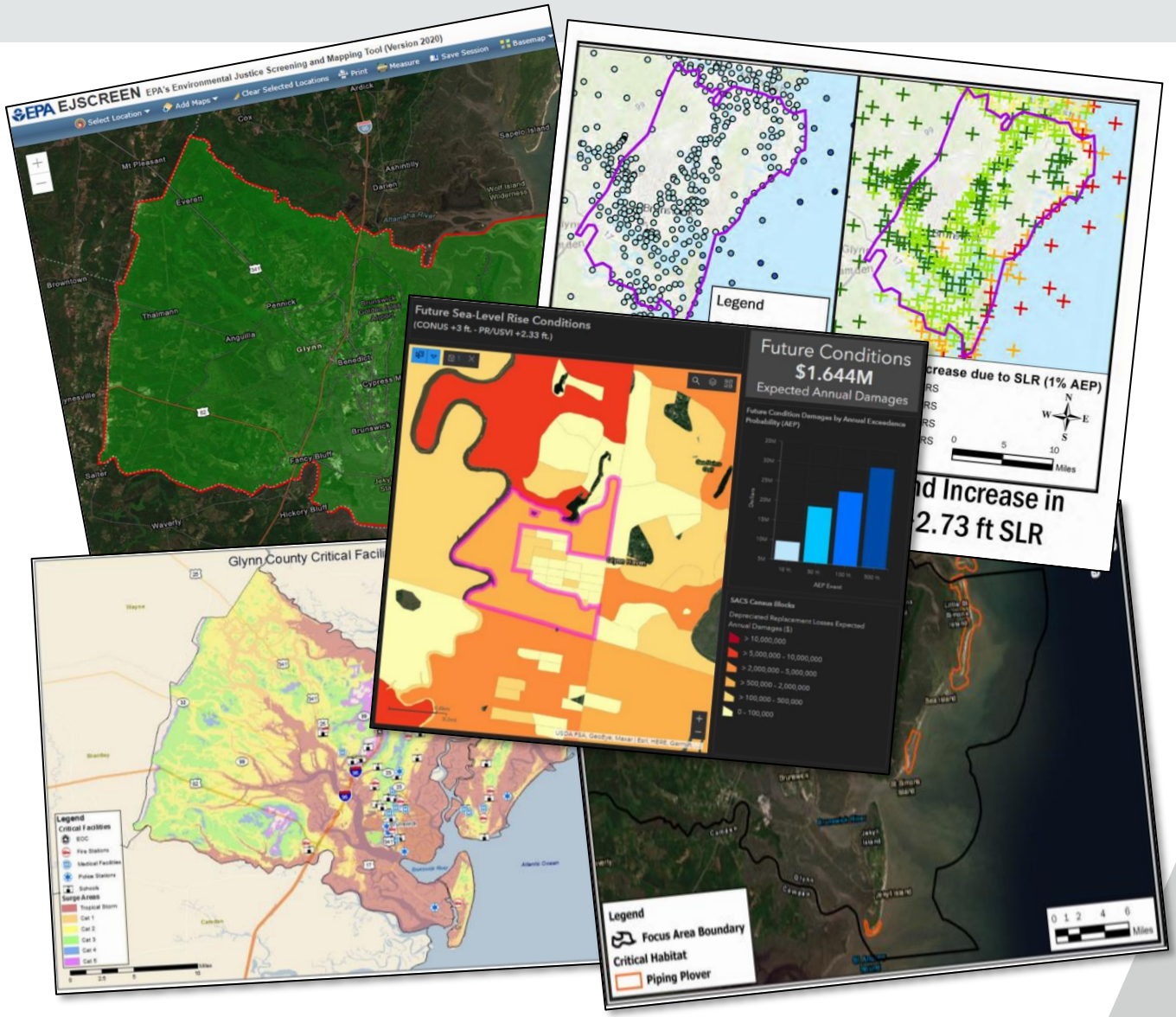
Chatham County Recommendation Example – RSM opportunities

Examples of beneficial use of dredged material alternatives near Tybee Island North Beach

FAAS analyses

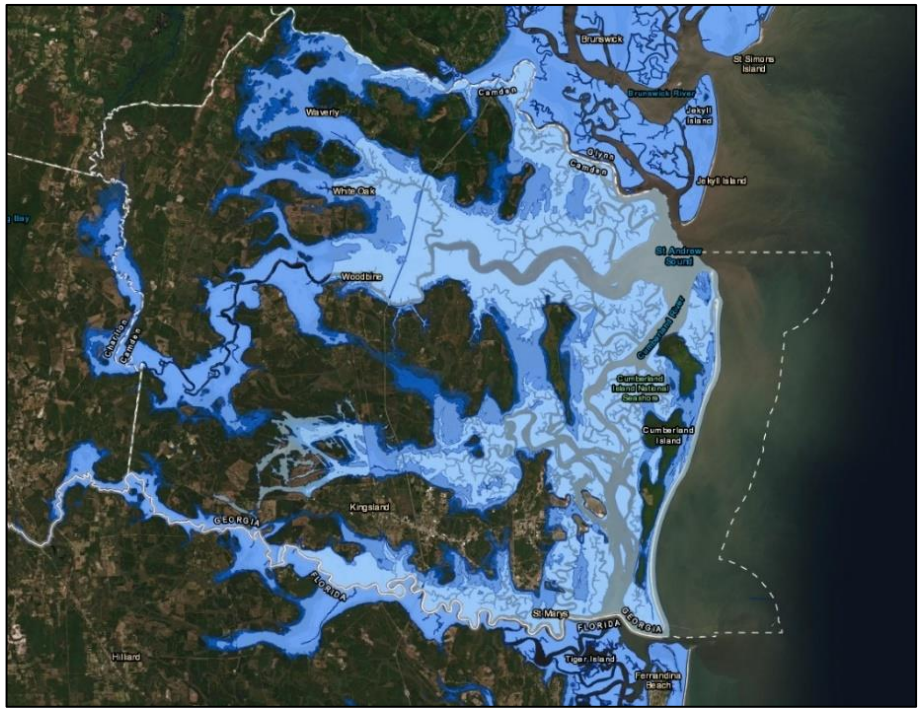
Other analyses found in the FAAS report:

- HAZUS economic risk assessment
- CHS wave height predictions
- Shoreline change
- CDC social vulnerability/EPA EJ Screen
- Critical habitat evaluation
- Cultural resources assessment



Tier 3 Example (local scale analysis)

Ongoing FPMS Study: Camden County Sea Level Rise Vulnerability Assessment.



- The Coastal Hazards System (CHS) is being used for a sea level rise vulnerability analysis for Camden County. CHS data was used to generate water surface grids for the 10% and 1% Annual Exceedance Probability (AEP) events for Camden County based on NOAA Intermediate High Sea Level Rise projections for the years 2050, 2075, and 2100.
- Inundation layers were intersected with infrastructure data provided by Camden County and sourced from national-level datasets to assess potential future impacts to infrastructure.
- The data was published to a web mapping application for visualization and use by Camden County, USACE, and other interested stakeholders.

Comment Collection

Submitting Your Comments

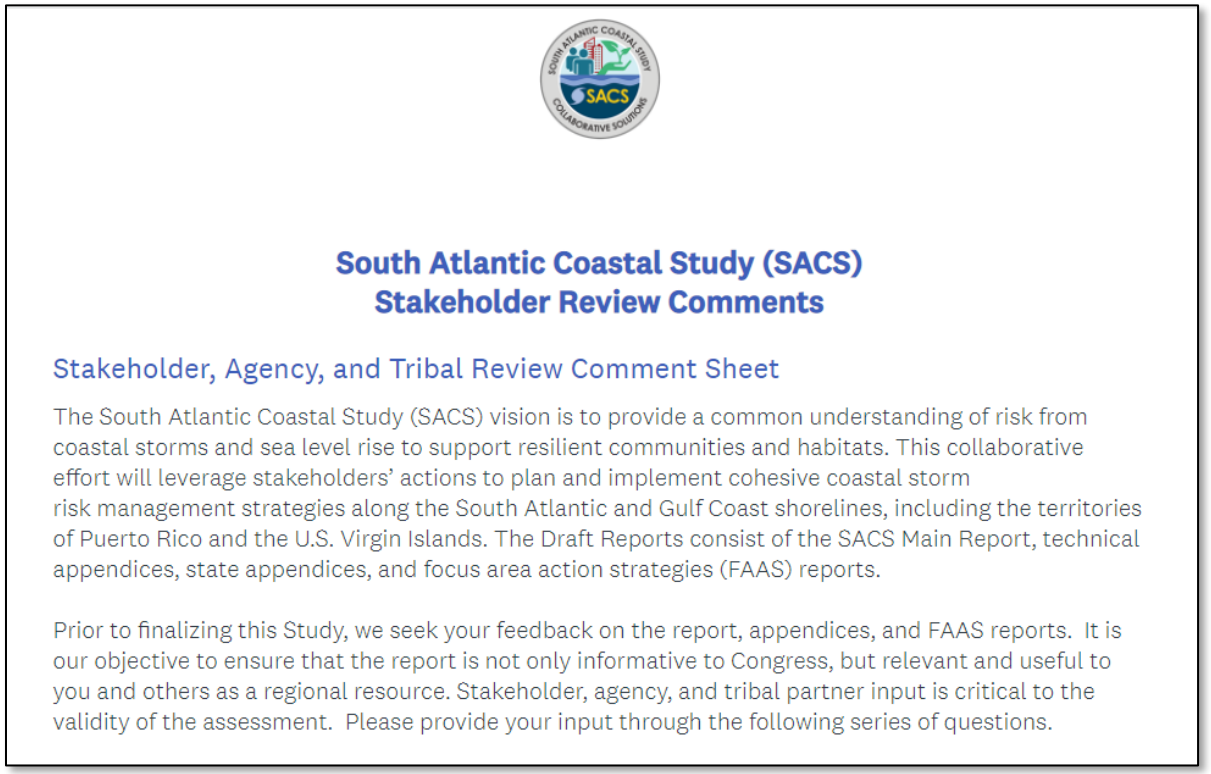
South Atlantic Coastal Study Main Report

Appendices

- Engineering Appendix
- Geospatial Appendix
- Outreach Appendix
- Alabama Appendix
- Florida Appendix
- Georgia Appendix
- Mississippi Appendix
- North Carolina Appendix
- Puerto Rico Appendix
- South Carolina Appendix
- U.S. Virgin Islands Appendix

- Link to comment form is on the SACS website
- Comments will be considered but not responded to individually
- Comment period closes **November 15, 2021**

https://www.surveymonkey.com/r/SACS_comments



South Atlantic Coastal Study (SACS)
Stakeholder Review Comments

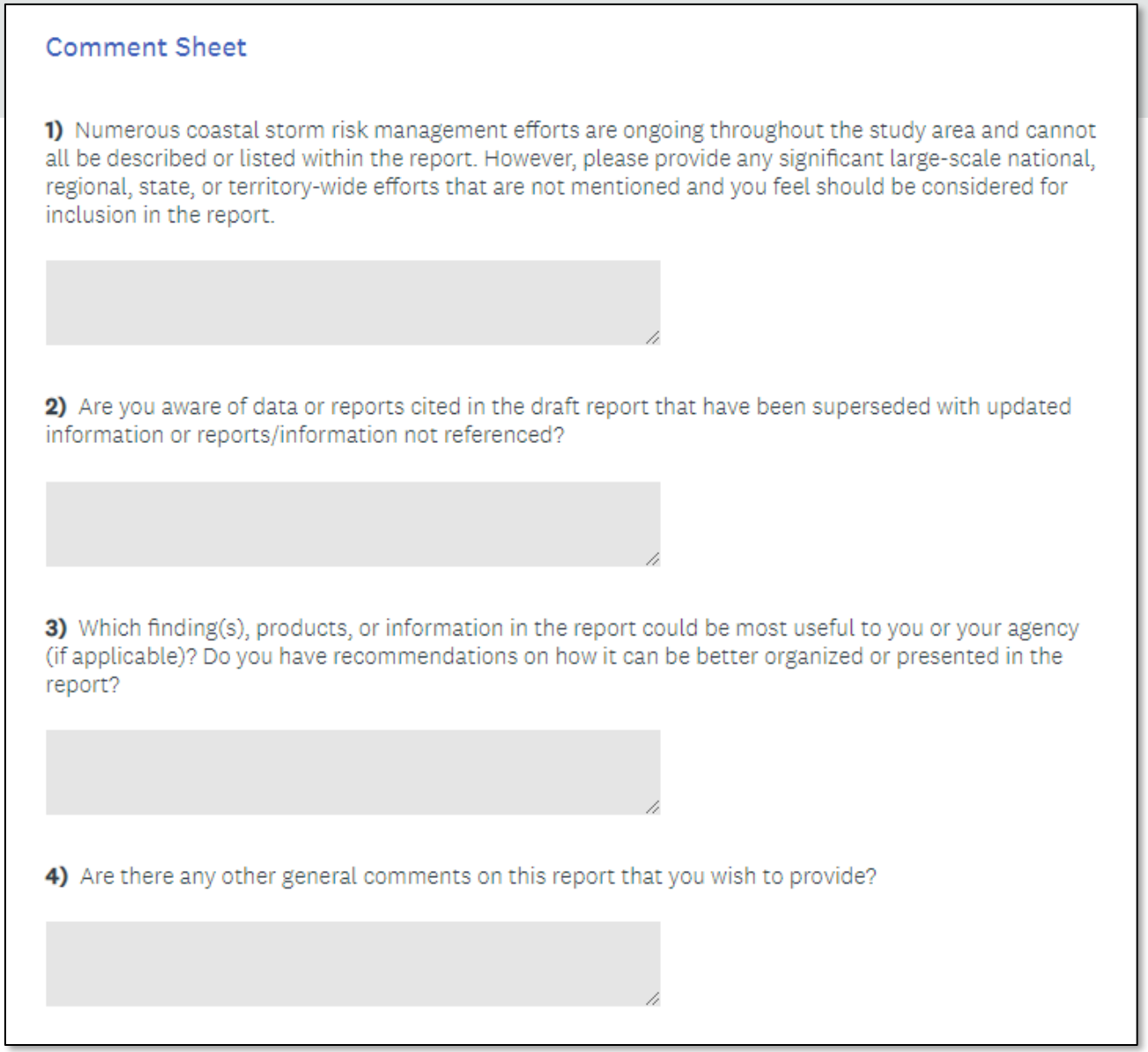
Stakeholder, Agency, and Tribal Review Comment Sheet

The South Atlantic Coastal Study (SACS) vision is to provide a common understanding of risk from coastal storms and sea level rise to support resilient communities and habitats. This collaborative effort will leverage stakeholders' actions to plan and implement cohesive coastal storm risk management strategies along the South Atlantic and Gulf Coast shorelines, including the territories of Puerto Rico and the U.S. Virgin Islands. The Draft Reports consist of the SACS Main Report, technical appendices, state appendices, and focus area action strategies (FAAS) reports.

Prior to finalizing this Study, we seek your feedback on the report, appendices, and FAAS reports. It is our objective to ensure that the report is not only informative to Congress, but relevant and useful to you and others as a regional resource. Stakeholder, agency, and tribal partner input is critical to the validity of the assessment. Please provide your input through the following series of questions.

Requested Information

- Name
- Title
- Organization
- Town/City and State
- Approval to Contact
- Telephone Number
- Email Address



Comment Sheet

1) Numerous coastal storm risk management efforts are ongoing throughout the study area and cannot all be described or listed within the report. However, please provide any significant large-scale national, regional, state, or territory-wide efforts that are not mentioned and you feel should be considered for inclusion in the report.

2) Are you aware of data or reports cited in the draft report that have been superseded with updated information or reports/information not referenced?

3) Which finding(s), products, or information in the report could be most useful to you or your agency (if applicable)? Do you have recommendations on how it can be better organized or presented in the report?

4) Are there any other general comments on this report that you wish to provide?

Questions and Discussion

Looking Ahead

OCT 2021: District Draft Report Roll Out Webinars

NOV 2021: Comment Period Closes on 15 Nov

JAN 2022: Incorporate comments into final report

AUG 2022: USACE South Atlantic Division approves final report

Thank You

ADDITIONAL INFORMATION
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Working Today to Build a Better Tomorrow